28 ELECTRICAL SERVICE UNITS

SCHEMATIC AND WIRING DIAGRAMS

1. GENERAL

1.01 This section shows the wiring of the 28 electrical service units and 28 electrical service unit subassemblies.

1.02 The section is reissued to change format and to provide most recent engineering information. Since 28A and 28J units are no longer manufactured, wiring information on them has been deleted. The 28B-1, 28U, 28Y, 28AB, and 28AC electrical service unit wiring information has been added.

1.03 The wiring diagrams, which are attached as part of this publication are listed in the diagram index. The index lists the subject matter and current issue of each diagram. When a diagram has an issue control sheet, only the control sheet is listed.

1.04 These drawings show schematic and wiring diagrams. Notes are included to explain the symbols used or point out special conditions that should be observed.

2. WIRING DIAGRAM INDEX (ATTACHMENTS)

TITLE	DIAGRAM NUMBER	CONTROL AND DIAGRAM SHEETS	ISSUE NO.
ELECTRICAL SERVICE UNIT WIRING DIAGRAMS			
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Schematic Wiring Diagram for LESU7/184 (Bell 28B)	2875WD	1	H
Wiring Diagram for LESU7/134 (Bell 28E)	2878WD	CTRL	1
Schematic Wiring Diagram for LESU7/134 (Bell 28E)	2879WD	1	19
Wiring Diagram for LESU11 (Bell 28C)	3286WD	1	H
Schematic Wiring Diagram for LESU11 (Bell 28C)	3289WD	1	G
Wiring Diagram for LESU13 (Bell 28F)	3292WD	CTRL	1
Schematic Wiring Diagram for LESU13 (Bell 28F)	3294WD	6	24

Prepared for American Telephone and Telegraph Company
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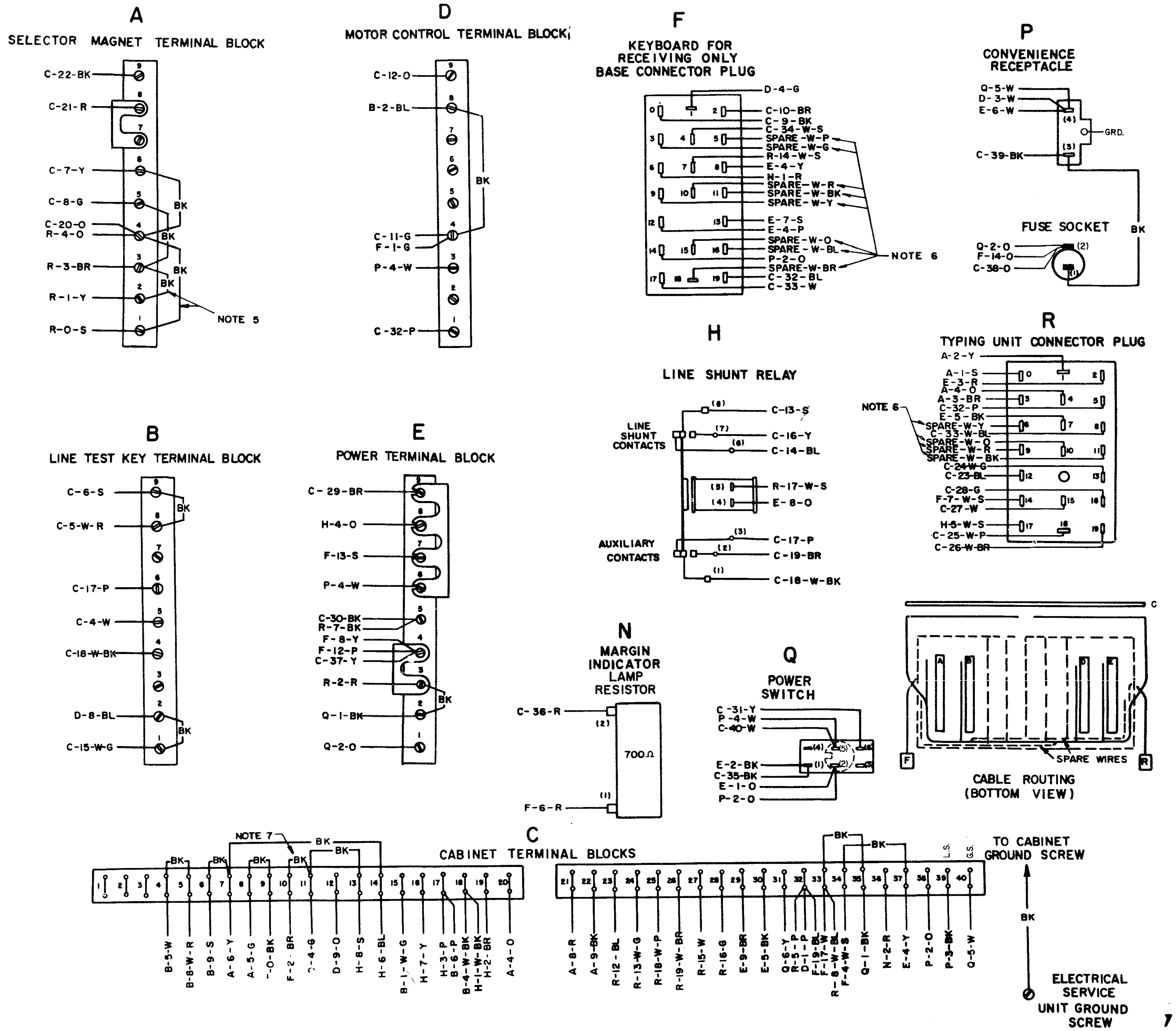
Printed in U.S.A.

TITLE	DIAGRAM NUMBER	CONTROL AND DIAGRAM SHEETS	ISSUE NO.
Wiring Diagram for LESU15 (Bell 28G)	3296WD	CTRL	2
Schematic Wiring Diagram for LESU15 (Bell 28G)	3298WD	3	12
Schematic Wiring Diagram for LESU12 (Bell 28D)	3343WD	1	P
Wiring Diagram for LESU12 (Bell 28D)	3344WD	1	K
Wiring Diagram for LESU27 (Bell 28K)	3624WD	1	A
Schematic Wiring Diagram for LESU27 (Bell 28K)	3625WD	1	B
Wiring Diagram for LESU30 (Bell 28D-1)	3638WD	1	B
Schematic Wiring Diagram for LESU30 (Bell 28D-1)	3639WD	1	C
Wiring Diagram for LESU31 (Bell 28E-1)	3640WD	1	C
Schematic Wiring Diagram for LESU31 (Bell 28E-1)	3641WD	1	F
Wiring Diagram for LESU32 (Bell 28H)	3642WD	2	6
Schematic Wiring Diagram for LESU32 (Bell 28H)	3643WD	2	E
Schematic Wiring Diagram for LESU35 (Bell 28F-1)	3659WD	2	C
Wiring Diagram for LESU35 (Bell 28F-1)	3660WD	CTRL	1
Schematic Wiring Diagram for LESU36 (Bell 28G-1)	3661WD	2	D
Wiring Diagram for LESU36 (Bell 28G-1)	3662WD	1	C
Wiring Diagram for LESU56 (Bell 28LA)	4205WD	1	F
Wiring Diagram for LESU58 (Bell 28LC, 28LC-1)	4206WD	1	H
Wiring Diagram for LESU57 (Bell 28LB)	4211WD	1	6
Wiring Diagram for LESU59 (Bell 28LD, 28LD-1)	4219WD	1	H
Schematic Wiring Diagram for LESU66 (Bell 28L)	4335WD	2	B
Wiring Diagram for LESU66 (Bell 28L)	4336WD	1	B

TITLE	DIAGRAM NUMBER	CONTROL AND DIAGRAM SHEETS	ISSUE NO.
Schematic Wiring Diagram for LESU67 (Bell 28M)	4341WD	1	C
Wiring Diagram for LESU67 (Bell 28M)	4342WD	2	D
Wiring Diagram for LESU75 (Bell 28D-2)	4430WD	1	A
Schematic Wiring Diagram for LESU75 (Bell 28D-2)	4431WD	1	B
Wiring Diagram for LESU72 (Bell 28T)	4486WD	CTRL	2
Schematic Wiring Diagram for LESU72 (Bell 28T)	4487WD	1	12
Schematic Wiring Diagram for LESU80 (Bell 28N)	4900WD	1	5
Wiring Diagram for LESU80 (Bell 28N)	4901WD	1	B
Schematic Wiring Diagram LESU82 (Bell 28P)	4909WD	1	D
Wiring Diagram for LESU82 (Bell 28P)	4910WD	CTRL	1
Wiring Diagram for LESU86 (Bell 28R)	4911WD	1	B
Schematic Wiring Diagram for LESU86 (Bell 28R)	4912WD	1	C
Wiring Diagram for LESU87 (Bell 28S)	4913WD	1	A
Schematic Wiring Diagram for LESU87 (Bell 28S)	4914WD	1	B
Schematic Wiring Diagram for LESU81 (Bell 28N-1)	4918WD	1	D
Wiring Diagram for LESU81 (Bell 28N-1)	4919WD	1	C
Wiring Diagram for LESU83 (Bell 28P-1)	4931WD	1	C
Schematic Wiring Diagram for LESU83 (Bell 28P-1)	4932WD	1	C
Wiring Diagram for LESU95 (Bell 28W)	5928WD	CTRL	2
Schematic Wiring Diagram for LESU95 (Bell 28W)	5929WD	1	A
Wiring Diagram for LESU96 (Bell 28U)	5930WD	1	1
Schematic Wiring Diagrm for LESU96 (Bell 28U)	5931WD	1	3
Wiring Diagram for LESU107 (Bell 28B-1)	6489WD	1	3

TITLE	DIAGRAM NUMBER	CONTROL AND DIAGRAM SHEETS	ISSUE NO.
Schematic Wiring Diagram for LESU107 (Bell 28B-1)	6490WD	1	2
Wiring Diagram for LESU113 (Bell 28AB)	7156WD	2	5
Schematic Wiring Diagram for LESU113 (Bell 28AB)	7157WD	4	3
Wiring Diagram for LESU112 (Bell 28AC)	7158WD	CTRL	2
Schematic Wiring Diagram for LESU112 (Bell 28AC)	7159WD	3	4
Wiring Diagram for LESU116 (Bell 28Y)	7762WD	CTRL	2
SUBASSEMBLY WIRING DIAGRAMS			
Line Relay Mounting Assembly	152623	-	-
Capacitor Resistor Assembly	152624	-	-
Line Test Key Assembly	152625	-	-
Rectifier Assembly	152950	-	-
Electrical Motor Control Assembly	153251	-	-

NO.	NOTES
1.	WIRING LEGEND: —DISTANT TERMINATING AREA —DISTANT TERMINATING DESIGNATION A-1-W-BL —WIRE COLOR CODE
2.	COLOR CODE: BK-BLACK R-RED BR-BROWN G-GREEN BL-BLUE S-SLATE W-WHITE P-PURPLE Y-YELLOW O-ORANGE
3.	UNIT WIRED FOR 115 VOLTS 50 TO 60 CYCLE AC POWER INPUT ONLY.
4.	PLUGS VIEWED FROM SOLDERED TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION, REMOVE AND ADD CONNECTIONS AS FOLLOWS: SIGNAL LINE CURRENT — CONNECTIONS REMOVED — CONNECTIONS ADDED .020 AMP. — A1-A4, A2-A3 — A1-A2* *PLACE TWO STRAPS IN PARALLEL
6.	THE SPARE LEADS FROM THE KEYBOARD (OR REC.ONLY BASE) AND TYPING UNIT CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT RESPECTIVELY.
7.	REMOVE THIS STRAP WHEN ASSOCIATED KEYBOARD OR REC-ONLY BASE IS EQUIPPED WITH AN ELECTRICAL BREAK SWITCH.
8.	FOR SCHEMATIC WIRING DIAGRAM, SEE 2875WD.



2874WD

REVISIONS

ISSUE	DATE	AUTH. NO.
C4	5-8-57	28-7615
D5	3-28-62	69768-10
E6	4-17-62	73132
7	3 22 68	97526 RC

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU7/184

APPROVALS	
D AND R	E OF M
E-NUMBER	
PROD. NO. 2874WD	
DATE 2-20-54	
P.D. FILE NO. 2-30.65.156A	
DRAWN N.A.R.	CHKD.
ENGD. G.A.O.	APPD.

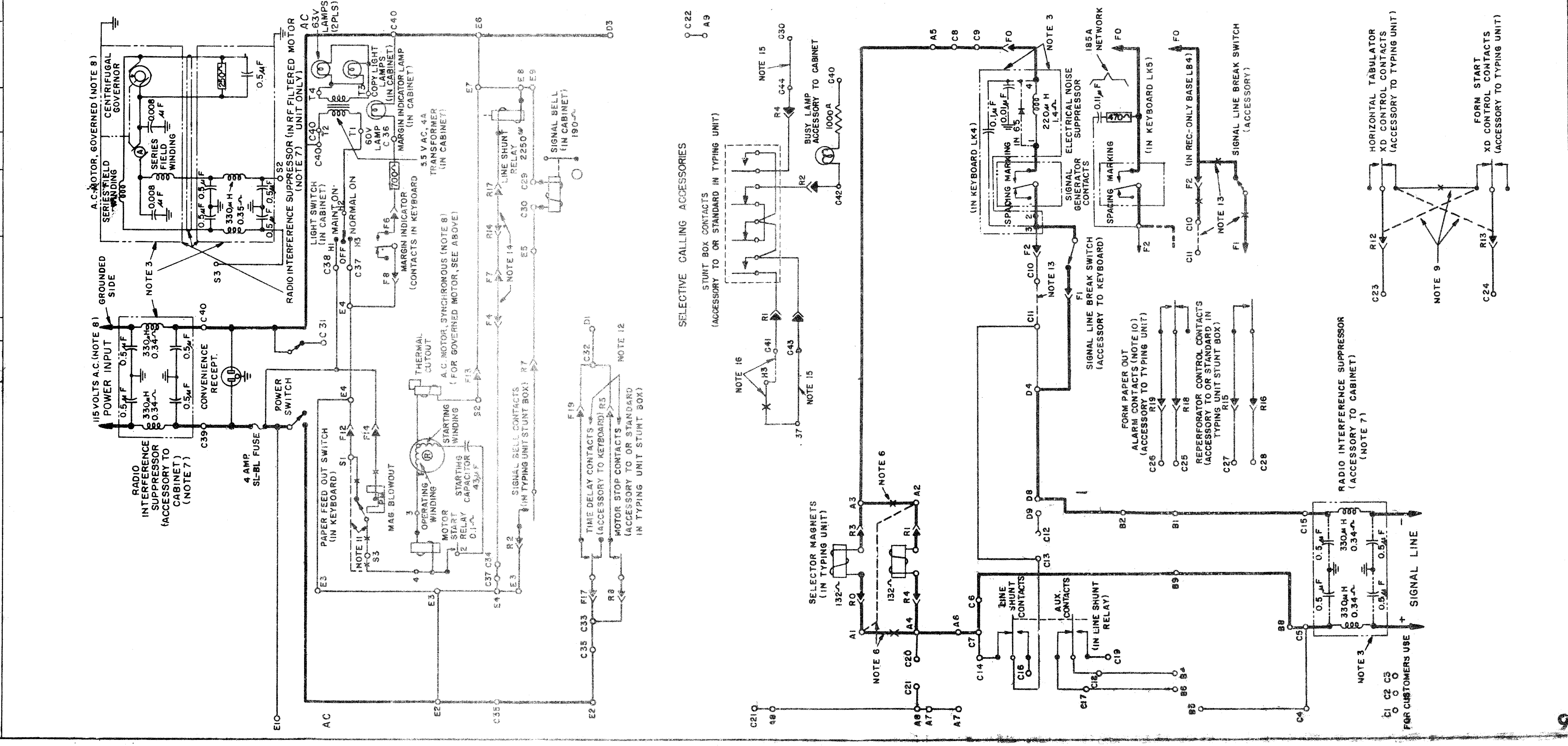
TELETYPE
CORPORATION

2874WD

7

NO.	NOTES
1	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS, SEE: WD NUMBER — UNITS DIRECTLY OPERABLE WITH LESU 7 2883WD — BASE, RECEIVING ONLY - LB4 3236 WD — CABINETS - LAC 203, 204, 205 2874 WD — ELECTRICAL SERVICE UNIT LESU 7/184 2882 WD — KEYBOARDS - LK4, 5 2900 WD — MOTOR UNITS - LMU 3, 4, 6 2884 WD — PAGE TYPING UNITS - LP4, 5, 7 2880 WD — PAGE TYPING UNITS - LP6, 8
2	LEGEND ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU) ○ B LINE TEST KEY TERMINAL BLOCK (IN LESE) ○ C CABINET TERMINAL BLOCK ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU) ○ E POWER TERMINAL BLOCK (IN LESU) ≪ F KEYBOARD OR REC. ONLY BASE CONNECTOR. ≪ R TYPING UNIT CONNECTOR ○ S MOTOR TERMINAL BLOCK (ON LK OR LB)
3	DOT DASH ——— LINES INDICATE FILTERING SHIELDING AND SUPPRESSION NETWORKS.
4	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE - ENERGIZED POSITIONS
5	a RESISTANCE VALUES IN OHMS (Ω) b INDUCTANCE VALUES IN MICROHENRIES (μH) c CAPACITANCE VALUES IN MICROFARADS (μF)
6	CIRCUITS SHOW FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION FOR .020 AMP. LINE CURRENT, ADD DASHED (- - - -) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—) IN SELECTOR MAGNET CIRCUIT.
7	a USE POWER AND SIGNAL LINE SUPPRESSORS AND SYNC. OR GOV. - FILTER MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE. b FOR OTHER INSTALLATIONS, OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR, IF USED, DIRECT TO TERMINALS SHOWN.
8	USE SYNCHRONOUS MOTOR ON REGULATED 60∿ (±1%) A.C. POWER ONLY. GOVERNED MOTOR AND OTHER POWER CIRCUITS OPERABLE ON 50-60∿ UNREGULATED A.C.
9	CIRCUIT SHOWS BOTH HORIZONTAL TABULATOR AND FORM START CONTROL USED ON TYPING UNIT. WHEN ONLY ONE CONTROL IS USED, OMIT CONNECTION MARKED (—✕—) AND ADD PROPER DASHED (- - - -) CONNECTION IN TYPING UNIT CIRCUITS.

NO.	NOTES
10	FORM PAPER OUT ALARM CONTACTS MAY BE MOUNTED ON EITHER THE TYPING UNIT OR EXTERNAL TO THE CABINET. IN LATTER EVENT, CONNECTIONS ARE MADE DIRECTLY TO TERMINALS C25 AND C26
11	WHEN PAPER FEED-OUT SWITCH IS NOT USED, ADD DASHED (- - - -) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—) IN MOTOR POWER CIRCUITS.
12	ASSOCIATED APPARATUS MAY CONTAIN INACTIVE ACCESSORY COMPONENTS
13	CIRCUITS SHOW A SIGNAL LINE BREAK SWITCH IN BOTH KEYBOARD AND RECEIVING ONLY BASE, WHEN SWITCH NOT USED, ADD DASHED (- - - -) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—).
14	IF LK3 KEYBOARD LB3 REC. ONLY BASE, OR LP3 TYPING UNIT IS TO BE USED WITH LESU 7/184, STRAP F4 TO F7 AND/OR R14 TO R17 MUST BE ADDED TO ITS CONNECTORS IN ORDER TO COMPLETE LINE SHUNT RELAY CIRCUIT. (EITHER STRAP MAY ALREADY BE IN CIRCUIT)
15	CONNECTIONS FURNISHED BY THE CUSTOMER.
16	WHEN BUSY LAMP AND AUXILIARY TERMINALS ARE USED OMIT CONNECTIONS MARKED (✱) AND ADDED DASHED (- - -) CONNECTIONS.


115 VOLTS A.C. (NOTE 8) POWER INPUT
GROUNDED SIDE
RADIO INTERFERENCE SUPPRESSOR (ACCESSORY TO CABINET) (NOTE 7)
CONVENIENCE RECEPT.
POWER SWITCH
4 AMP. SL-BL FUSE
A.C. MOTOR, GOVERNED (NOTE 8)
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY) (NOTE 7)
A.C. LAMPS
COPY LIGHT LAMPS (IN CABINET)
LIGHT SWITCH (IN CABINET)
MAIN ON
NORMAL ON
6.3 VAC. 4A TRANSFORMER (IN CABINET)
MARGIN INDICATOR LAMP (IN CABINET)
MARGIN INDICATOR (CONTACTS IN KEYBOARD)
LINE SHUNT RELAY
SIGNAL BELL (IN CABINET)
A.C. MOTOR SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR, SEE ABOVE)
THERMAL CUTOUT
STARTING WINDING
STARTING CAPACITOR
OPERATING WINDING
MOTOR START RELAY
MAG BLOWOUT
PAPER FEED OUT SWITCH (IN KEYBOARD)
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
TIME DELAY CONTACTS (ACCESSORY TO KEYBOARD)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
SELECTIVE CALLING ACCESSORIES
STUNT BOX CONTACTS (ACCESSORY TO OR STANDARD IN TYPING UNIT)
BUSY LAMP ACCESSORY TO CABINET
SELECTOR MAGNETS (IN TYPING UNIT)
LINE SHUNT CONTACTS
AUX. CONTACTS (IN LINE SHUNT RELAY)
(IN KEYBOARD LK4)
SPACING
MARKING
SIGNAL GENERATOR CONTACTS
ELECTRICAL NOISE SUPPRESSOR
(IN KEYBOARD LK5)
(IN REC-ONLY BASE LB4)
SIGNAL LINE BREAK SWITCH (ACCESSORY)
SIGNAL LINE BREAK SWITCH (ACCESSORY TO KEYBOARD)
FORM PAPER OUT ALARM CONTACTS (NOTE 10) (ACCESSORY TO TYPING UNIT)
REPERFORATOR CONTROL CONTACTS (ACCESSORY TO OR STANDARD IN TYPING UNIT STUNT BOX)
HORIZONTAL TABULATOR XD CONTROL CONTACTS (ACCESSORY TO TYPING UNIT)
FORM START XD CONTROL CONTACTS (ACCESSORY TO TYPING UNIT)
RADIO INTERFERENCE SUPPRESSOR (ACCESSORY TO CABINET) (NOTE 7)
SIGNAL LINE
FOR CUSTOMERS USE

2875WD

REVISIONS

ISSUE	DATE	AUTH. NO.
D	12-30-56	28-7216
E	5-2-57	28-7593
F	7-11-57	28-7723
G	3-28-62	69768-10
H	11-20-63	78859

SCHEMATIC
WIRING DIAGRAM
MODEL 28
PAGE PRINTER SET
WITH FACILITIES PROVIDED
BY
ELEC SERVICE UNIT
LESU 7/184
AND ASSOCIATED UNITS

D [illegible] 2-16-54
PD. FILE TO [illegible]
DRAWN [illegible]
ENGD: [illegible] A.G. APPD [illegible]

TELETYPE
CORPORATION

9 2875WD

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

ISSUE CONTROL RECORD

SHEET NO.	ISSUE 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	X	X	X	X	X	X	X	X	X	X								
2	X	X	X	X	X	X	X	X	X	X								

2878 WD

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
- 1	4-7-66	90222

ISSUE CONTROL SHEET 1 OF 1

ACTUAL WIRING DIAGRAM FOR MODEL 28 ELECTRICAL SERVICE UNIT LESU 7/134,151

WD NUMBER 2878 WD	
DRAWN DGS	CHKD.
ENGD. RHK	APPD.

TELETYPE
CORPORATION

2878 WD

1

TC 482 (1-66) SEE R&D ROUTINE #5 FOR USE OF THIS FORM

SEE SHEET I FOR NOTES

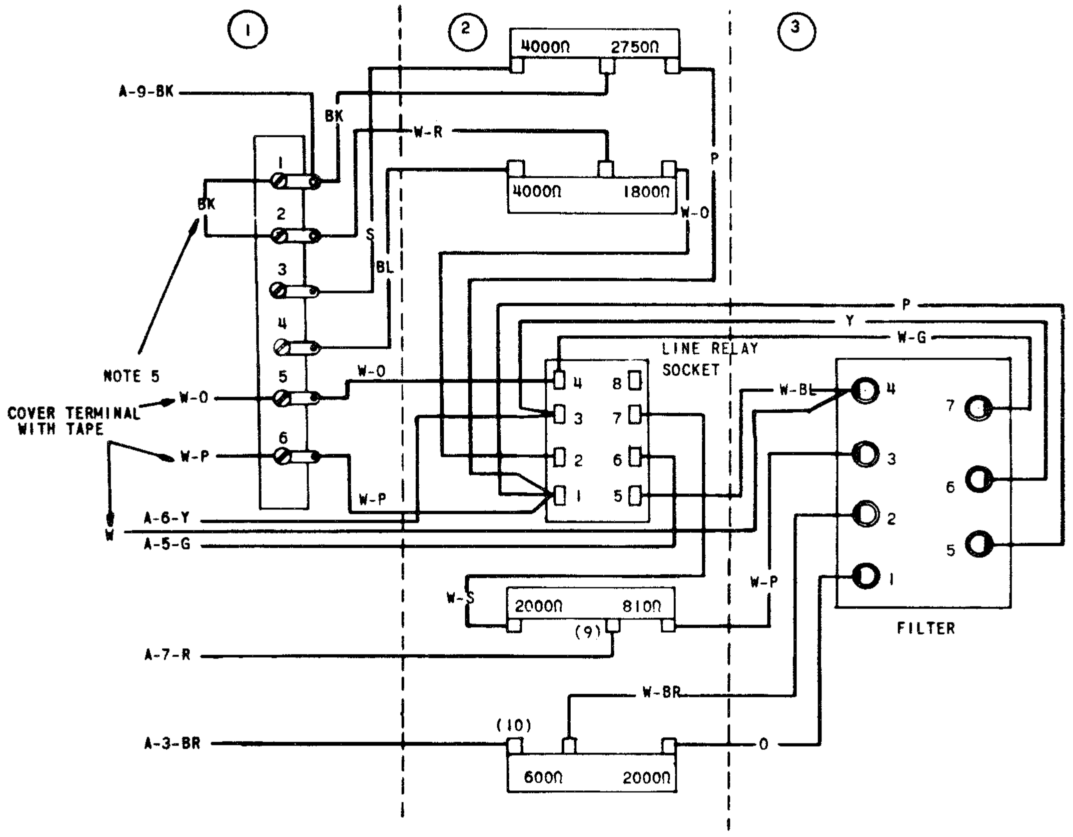
NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS PART OF THIS W.D.

2878WD

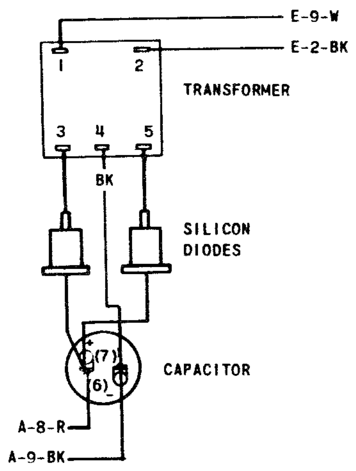
REVISIONS

ISSUE	DATE	AUTH. NO.
(A) 2	9-15-54	28-4472
~~B~~ 3	1-26-55	28-4926
~~C~~ 4	2-28-55	28-5008
~~D~~5	3-4-55	28-5047
~~E~~6	3-30-55	28-5192
~~F~~7	5-8-57	28-7615
8	3-16-61	68761-4
9	12-7-61	71860
10	3-28-62	69768-10
— 11	4-7-66	90222

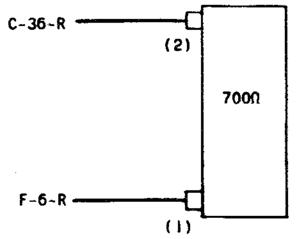
J
152623
LINE RELAY MOUNTING ASSEMBLY



L
152950
RECTIFIER ASSEMBLY



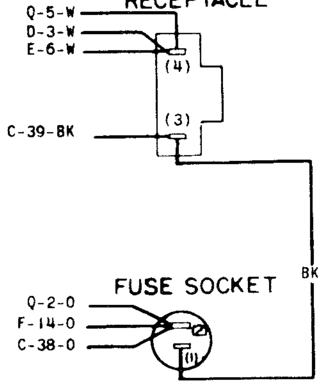
N
MARGIN INDICATOR LAMP RESISTOR



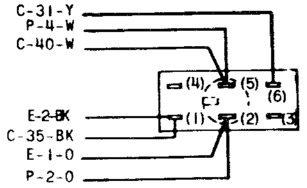
SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 2

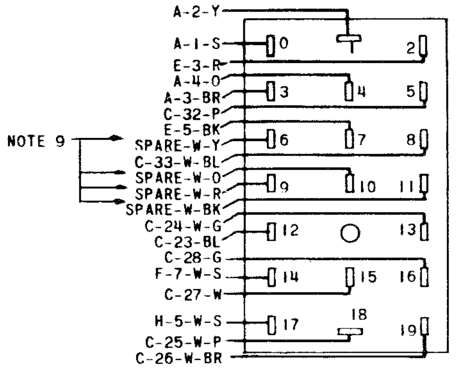
P
CONVENIENCE RECEPTACLE

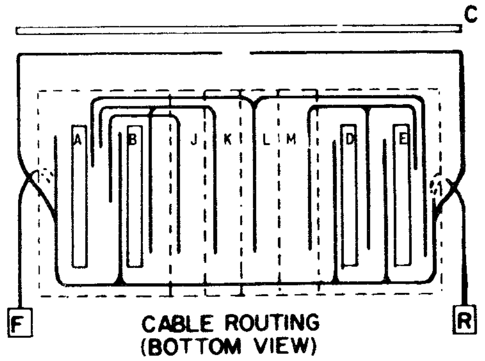


Q
POWER SWITCH



R
TYPING UNIT CONNECTOR PLUG





CABLE ROUTING
(BOTTOM VIEW)

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU7/134, 151

APPROVALS	
D AND R	E OF M
HJK	

E-NUMBER
PROD. NO. 2878WD
DATE 2/20/64
P.D. FILE NO. 2-30.65.156A
DRAWN H.K.G. CHKD.
ENGD. R.H.K. APPD.

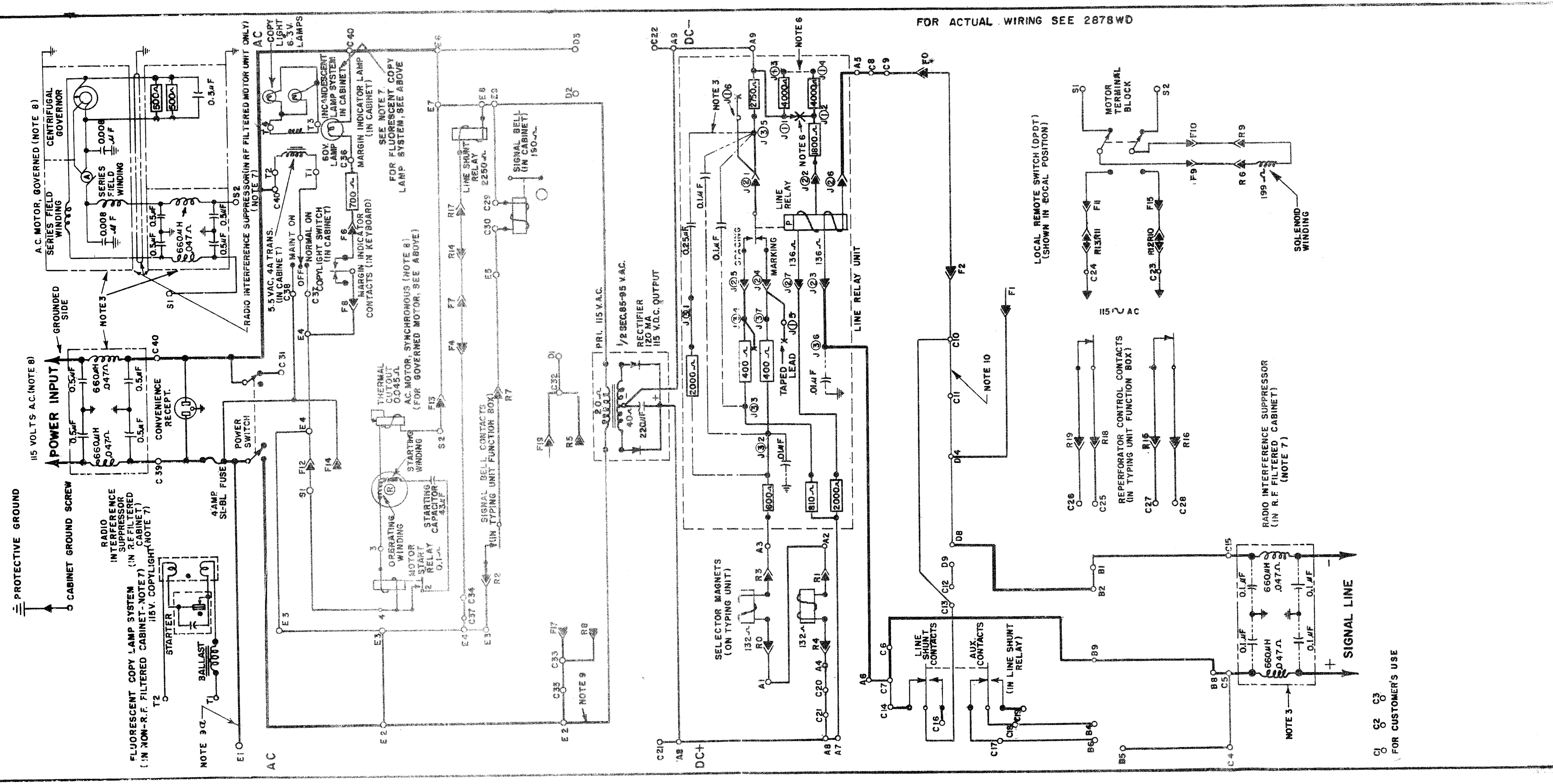
TELETYPE
CORPORATION

2878WD

NO	NOTES
1	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS, SEE: WD NUMBER — UNITS DIRECTLY OPERABLE WITH LESU 7 2883WD — BASE, RECEIVING ONLY—L B 4 3236WD — CABINETS—LAC 203, 204, 205 2878WD — ELECTRICAL SERVICE UNIT—LESU 7/134, 151 2882WD — KEYBOARDS—LK 4,5 2900WD — MOTOR UNITS—L M U 3,4,6 2864WD — PAGE TYPING UNITS—L P 4,5,7 2880WD — PAGE TYPING UNITS—LP 6,8 5973WD — CABINET (FLUORESCENT COPYLIGHT) LAC220
2	LEGEND ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU). ○ B LINE TEST KEY TERMINAL BLOCK (IN LESU) ○ C CABINET TERMINAL BLOCK. ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU) ○ E POWER TERMINAL BLOCK (IN LESU) ≪ F KEYBOARD CONNECTOR. ○ J① TERMINAL STRIP (ON LINE RELAY ASSEM. IN LESU) ≪ J② LINE RELAY CONNECTOR (IN LESU) ● J③ LINE RELAY FILTER (IN LESU) ≪ R TYPING UNIT CONNECTOR. ○ S MOTOR TERMINAL BLOCK (IN LK) ○ T COPYLIGHT TERMINAL BLOCK (IN LAC)
3	DOT DASH —·—·— LINES INDICATE FILTERING. SHIELDING AND SUPPRESSION NETWORKS.
4	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
5	a. RESISTANCE VALUES IN OHMS (Ω) b. INDUCTANCE VALUES IN MICROHENRIES (μH) c. CAPACITANCE VALUES IN MICROFARADS (μF)
6	CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. LINE CURRENT, ADD DASHED (– – – –) CONNECTION AND OMIT CONNECTION MARKED (——×——) IN LINE RELAY CIRCUIT.
7	a. USE POWER AND SIGNAL LINE NOISE SUPPRESSORS, SYNC. OR FILT. GOV. MOTOR, AND INCANDESCENT LAMP SYSTEM FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE. b. FOR OTHER INSTALLATIONS, OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECT TO TERMINALS SHOWN.
8	USE SYNCHRONOUS MOTOR ON REGULATED 60∿(±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60∿ UNREGULATED A.C.
9	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. FOR CONTINUOUS OPERATION, MOVE PRIMARY (INPUT) LEAD FROM E 2 TO E 1.
10	WHEN RECEIVING ONLY BASE IS USED CONNECT C-10 TO C-11
11	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING SIGNAL LINE.

NO	NOTES

FOR ACTUAL WIRING SEE 2878WD


POWER INPUT
115 VOLTS A.C. (NOTE 8)
GROUNDED SIDE
PROTECTIVE GROUND
CABINET GROUND SCREW
CONVENIENCE RECEPT.
POWER SWITCH
4 AMP SL-BL FUSE
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
FLUORESCENT COPY LAMP SYSTEM (IN NON-R.F. FILTERED CABINET-NOTE 7) 115V. COPYLIGHT
STARTER
BALLAST
A.C. MOTOR, GOVERNED (NOTE 8)
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY)
COPY LIGHT 6.3V LAMPS
INCANDESCENT LAMP SYSTEM (IN CABINET)
6.3 VAC, 4A TRANS. (IN CABINET)
MAINT. ON
OFF
NORMAL ON
COPYLIGHT SWITCH (IN CABINET)
MARGIN INDICATOR LAMP (IN CABINET)
MARGIN INDICATOR CONTACTS (IN KEYBOARD)
SEE NOTE 7 FOR FLUORESCENT COPY LAMP SYSTEM, SEE ABOVE
A.C. MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR, SEE ABOVE)
THERMAL CUTOUT
STARTING WINDING
OPERATING WINDING
STARTING CAPACITOR
MOTOR START RELAY
LINE SHUNT RELAY 2250Ω
SIGNAL BELL (IN CABINET) 150Ω
SIGNAL BELL CONTACTS (IN TYPING UNIT FUNCTION BOX)
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
RECTIFIER 120 MA. 115 V.D.C. OUTPUT
AC
DC−
DC+
SPACING
MARKING
LINE RELAY
TAPED LEAD
LINE RELAY UNIT
SELECTOR MAGNETS (ON TYPING UNIT)
LINE SHUNT CONTACTS
AUX. CONTACTS (IN LINE SHUNT RELAY)
LOCAL REMOTE SWITCH (DPDT) (SHOWN IN LOCAL POSITION)
MOTOR TERMINAL BLOCK
SOLENOID WINDING
115∿AC
REPERFORATOR CONTROL CONTACTS (IN TYPING UNIT FUNCTION BOX)
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
SIGNAL LINE
FOR CUSTOMER'S USE
NOTE 3
NOTE 6
NOTE 9
NOTE 10
660μH
.047Ω
0.5μF
0.1μF
2000Ω
400Ω
136Ω
132Ω
810Ω
600Ω

2879WD		
REVISIONS		
[illegible]	DATE	AUTH. NO.
X11	7-11-57	28-7723
X12	8-4-59	28-11509
X13	-20-61	28-14524
X14	3-22-61	69761-15
X15	12-7-61	71860
X16	3-28-62	69768-10
X17	11-16-62	75143
X18	11-20-63	78859
19	1-3-66	88875

SCHEMATIC
WIRING DIAGRAM
ELECTRICAL
SERVICE UNIT
LESU 7/134, 151 &
ASSOCIATED MODEL 28
APPARATUS

INCLUDES:
LOCAL REMOTE SWITCH
LINE RELAY
RECTIFIER (LOCAL CIRCUIT SUPPLY)

DATE: 10-17-56
P.D. FILE NO. 2-3065.150
DRAWN [illegible] CHKD. [illegible]
ENGD. [illegible] APPD. [illegible]

TELETYPE
CORPORATION

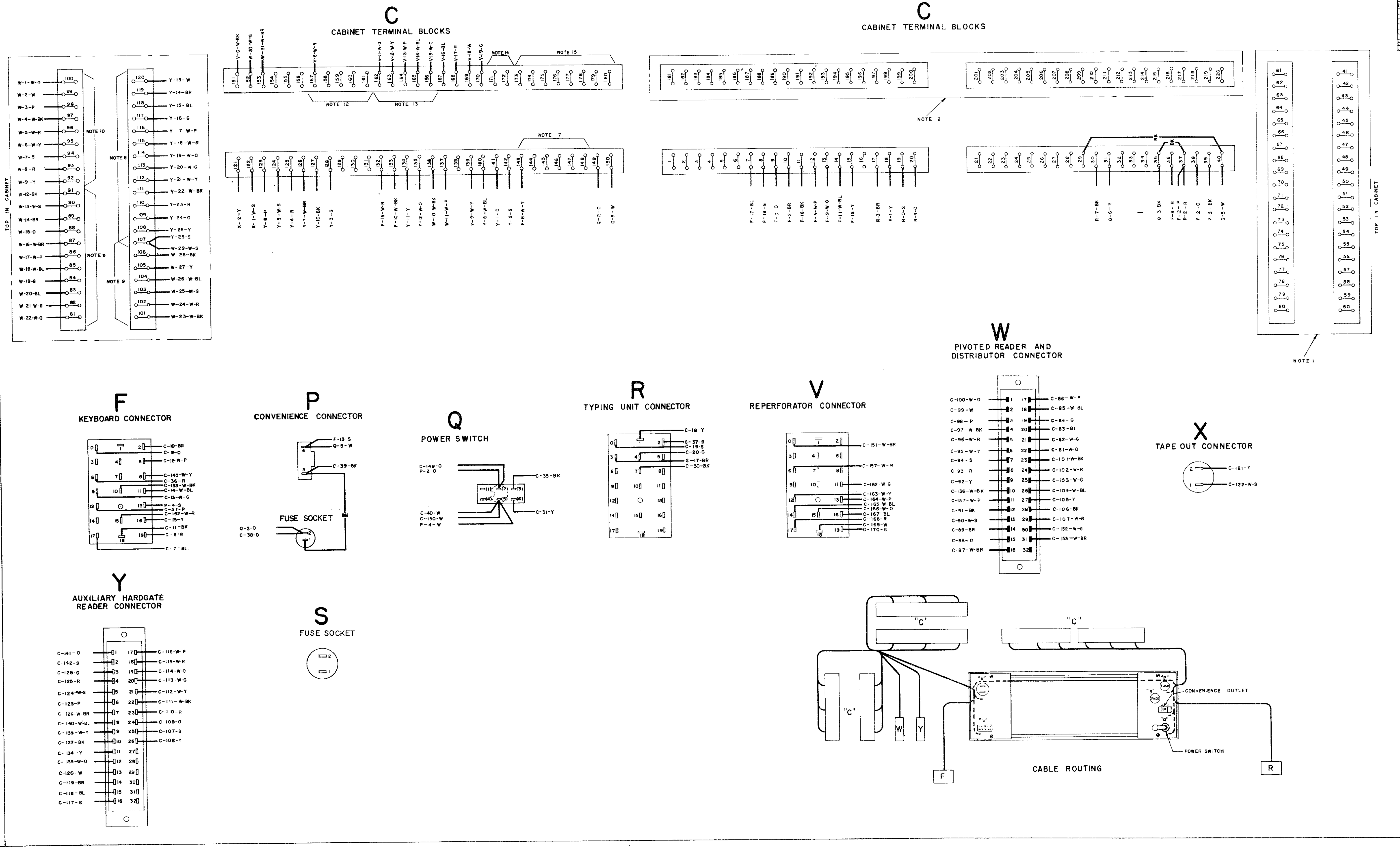
2879WD

d733-C

10¼X20½

D-8213 R 20½

NO.	NOTES
1.	FOR USE WITH SELECTIVE CALL ONLY.
2.	SUPPLIED IF REQUESTED BY CUSTOMER.
3.	WIRING LEGEND: A-1-W-BL DISTANT TERMINATING AREA DISTANT TERMINAL DESIGNATION WIRE COLOR CODE
4.	COLOR CODE BK — BLACK BR — BROWN R — RED O — ORANGE Y — YELLOW G — GREEN BL — BLUE P — PURPLE W — WHITE S — SLATE W-BK — WHITE-BLACK W-BR — WHITE-BROWN W-R — WHITE-RED W-O — WHITE-ORANGE W-Y — WHITE-YELLOW W-G — WHITE-GREEN W-BL — WHITE-BLUE W-P — WHITE-PURPLE W-S — WHITE-SLATE
5.	UNIT WIRED FOR 115 VOLTS. 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
6.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
7.	TERMINALS C-143 TO C-148 RESERVED FOR CABINET LAMP OPERATION.
8.	TERMINALS C-107 TO C-120 RESERVED FOR HARDGATE READER.
9.	TERMINALS C-101 TO C-107 & C-81 TO C-91 RESERVED FOR PIVOTED READER.
10.	TERMINALS C-92 TO C-100 RESERVED FOR DISTRIBUTOR.
11.	ASSOCIATED CABLE 158282
12.	TERMINALS C-157 TO C-161 RESERVED FOR PUNCH COMMON CONTACTS.
13.	TERMINALS C-162 TO C-166 RESERVED FOR PUNCH MARKING CONTACTS.
14.	TERMINALS C-171 TO C-172 RESERVED FOR KEYBOARD SELECTOR MAGNETS.
15.	TERMINALS C-173 TO C-180 RESERVED FOR TYPING KEYBOARD PERFORATOR FUNCTION CONTACTS.



3286WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	5-3-57	TP-1637
B	7-1-57	TP-2006
C	9-5-57	TP-2313
D	10-16-57	28-7966
E	12-18-57	TP-2917
F	3-20-61	69286
G	11-6-61	71508
H	3-28-62	69768-10

APPROVALS
D AND R
E OF M
E-NUMBER
PROD. NO. 3286WD

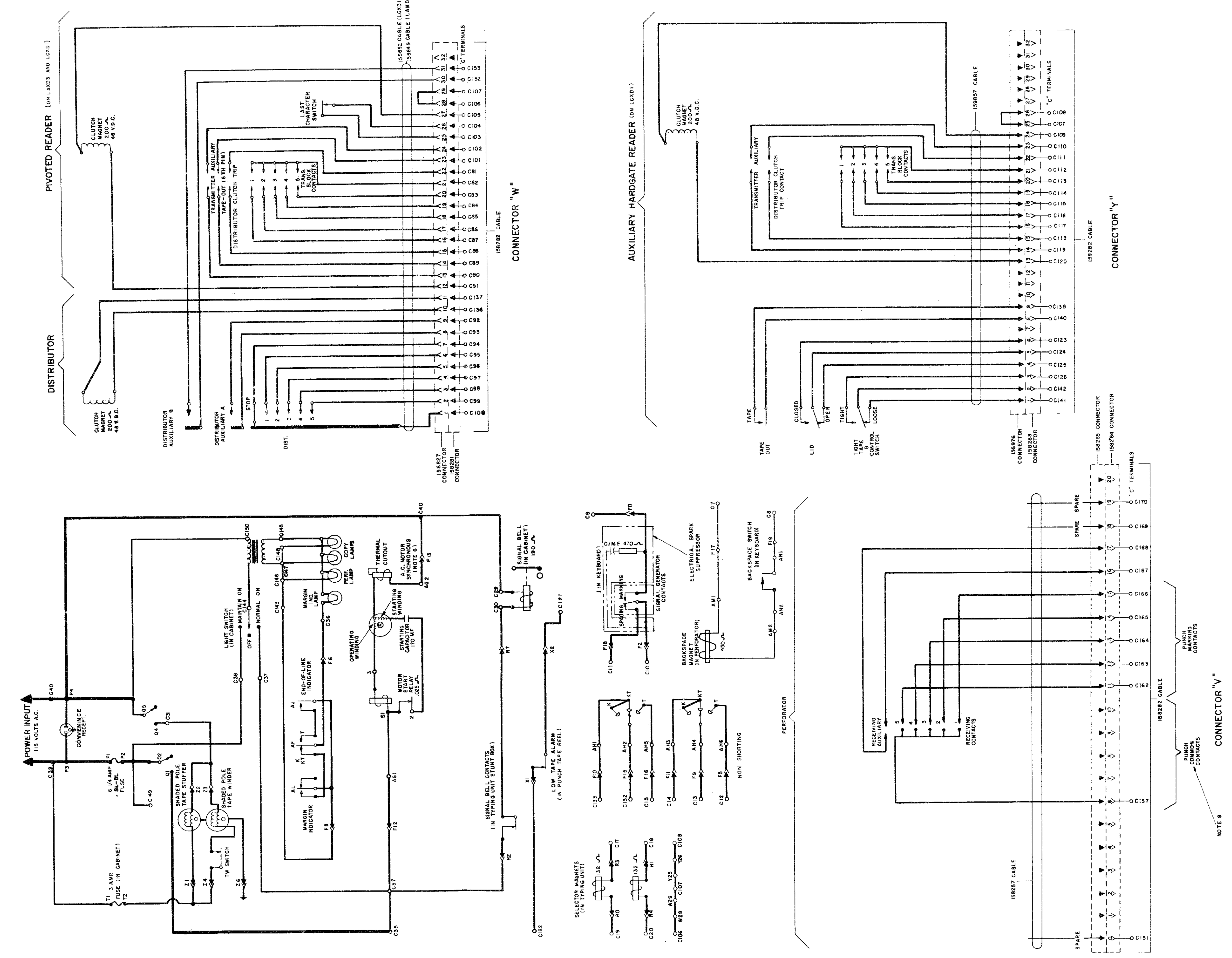
ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR- SP.
LESU 11

DATE: 1-5-57
P.D. FILE NO.
DRAWN: R.W.D. CHKD. R
ENGD. J.L. APPD.

TELETYPE
CORPORATION

3286WD

NO.	NOTES
1.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE: WD NUMBER — UNITS DIRECTLY OPERABLE WITH LESU 3264WD — CABINETS-LAAC 201, 202. 3286WD — ELECTRICAL SERVICE UNIT LESU II. 3285WD — KEYBOARDS-LAK 2. 2900WD — MOTOR UNITS-LMU. 2880WD — PAGE TYPING UNITS-LP6. 2864WD — PAGE TYPING UNITS-LP 3288WD — TRANSMITTER DISTRIBUTOR-LCXD1 3288WD — TRANSMITTER DISTRIBUTOR-LAXD3 3303WD — PERFORATOR LPE-2.
2.	LEGEND: ○ C CABINET TERMINAL BLOCK. ≪ F KEYBOARD CONNECTOR. ≪ R TYPING UNIT CONNECTOR. ≪ W TRANSMITTER DISTRIBUTOR CONNECTOR. ○ AG MOTOR TERMINAL BLOCK (ON LAK). ○ AH AUXILIARY SWITCH TERMINAL BLOCK (ON LAK). ≪ Z TW13 & TAPE STUFFER RECEPTACLES & PLUGS IN CABINET. ≪ Y AUXILIARY HARDGATE READER CONNECTOR.
3.	DOT DASH -·-·- LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.
4.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
5.	a. RESISTANCE IN OHMS (Ω). b. INDUCTANCE VALUES IN MICROHENRIES (MH) c. CAPACITANCE VALUES IN MICROFARADS (MF)
6.	a. USE POWER & SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV. - FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE. b. FOR OTHER INSTALLATIONS, OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECTLY TO TERMINALS SHOWN.
7.	SPARE LEAD FROM F18 IS RESERVED FOR POLAR OPERATION OF SIGNAL GENERATOR.
8.	
9.	PUNCH COMMON CONTACTS ARE STRAPPED AT SWITCH AND BROUGHT OUT ON TERMINAL V6.
10.	
11.	WHEN LESU II IS USED WITH LAXD, PLUG "Y" IS NOT CONNECTED BUT IS TAPED TO THE LESU CHASSIS. ADD STRAP FROM C107 TO C108.
12.	ASSOCIATED CABLES 159852 (LCXD1) 158282 (LESU II) 159849 (LAXD3) 159857 (LCXD1) 158257 (LPE-2)



3289WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
A	8-7-57	TP-210
B	9-4-57	TP-[illegible]
C	12-18-57	TP-[illegible]
D	4-23-58	28-[illegible]
E	6-4-59	28-1150[illegible]
F	[illegible]	[illegible]
G	11-26-63	76875

CASE-86-4

APPROVALS	
D AND D	E OF M
E-NUMBER	
PROD. NO. 3289WD	

SCHEMATIC
WIRING DIAGRAM
MODEL 28
ASR - SP
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU II
AND ASSOCIATED
UNITS
(LAXD3) & (LCXD.

DATE: 1-26-57	
P.D. FILE NO. 24-A65/[illegible]	
DRAWN: R.W.D	CHKD.
ENGD. J.L.	APPD.

TELETYPE
CORPORATION

3289WD

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

ISSUE CONTROL RECORD

SHEET NO.	ISSUE 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

3292 WD

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
-1	4-7-66	90222

ISSUE CONTROL
SHEET 1 OF 1

ACTUAL
WIRING DIAGRAM
FOR MODEL 28
ELECTRICAL
SERVICE UNIT
ASR-GP-OPT-1AC
LESU 13

WD NUMBER 3292 WD

DRAWN DGS	CHKD.
ENGD HSP	APPD.

TELETYPE
CORPORATION

3292 WD

TL 482 (1-56)

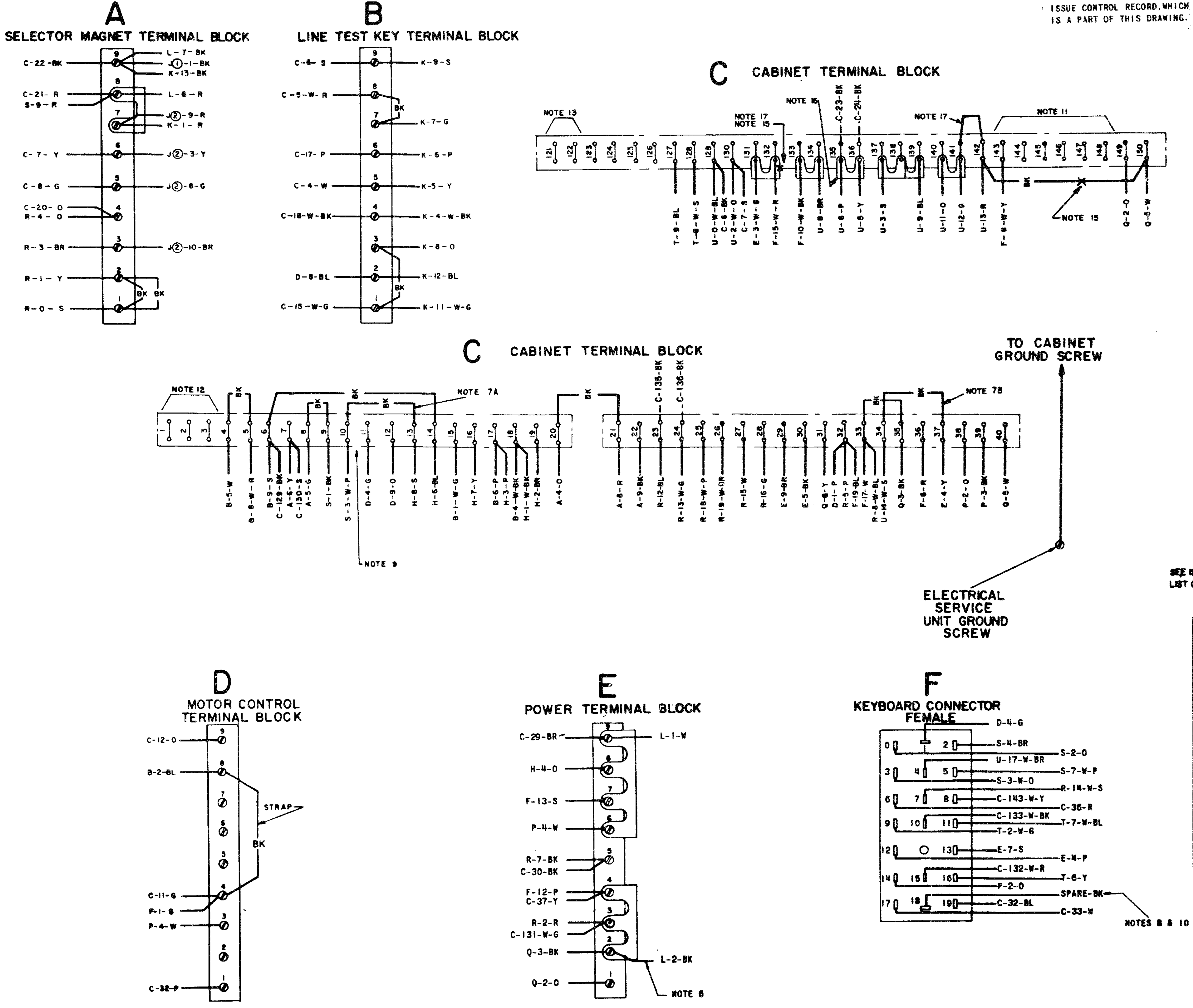
SEE R&D ROUTINE #5
FOR USE OF THIS FORM

NO.	NOTES
1.	WIRING LEGEND: A-1-W-BL DISTANT TERMINATING AREA DISTANT TERMINATING DESIGNATION WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK G - GREEN BR - BROWN BL - BLUE R - RED P - PURPLE O - ORANGE W - WHITE Y - YELLOW S - SLATE
3.	UNIT WIRED FOR 115 VOLTS, 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
4.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION, REMOVE AND ADD CONNECTIONS AS TABULATED BELOW:
6.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. A. FOR CONTINUOUS OPERATION, REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-1. B. FOR OPERATION FROM MOTOR CONTROL, REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-3.
7.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING LINE RELAY COIL AND KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATOR. A. IF KEYBOARD SHUNTING IS NOT DESIRED, OR WHEN SIGNAL LINE BREAK SWITCH IS PRESENT, REMOVE THE BLACK STRAP CONNECTED BETWEEN TERMINALS C-10 AND C-13 AND CONNECT TERMINALS C-9 AND C-13. B. FOR DIRECT CONTROL OF THE LINE SHUNT RELAY FROM THE POWER SWITCH, REMOVE STRAP BETWEEN TERMINALS C-34 AND C-37 AND CONNECT TERMINALS C-34 AND C-35. TERMINAL C-13 MAY THEN BE CONNECTED TO EITHER TERMINALS C-9, C-10, C-11 OR C-15 TO OBTAIN THE DESIRED SHUNTING OF THE SIGNAL LINE CIRCUIT.
8.	THE SPARE LEADS FROM THE KEYBOARD AND TRANSMITTER DISTRIBUTOR UNITS CONNECTORS ARE TERMINATED IN THE RIGHT END OF THE ELECTRICAL SERVICE UNIT. THE SPARE LEADS FROM THE TYPING UNIT CONNECTORS ARE TERMINATED IN THE LEFT END OF THE ELECTRICAL SERVICE UNIT.
9.	ADD STRAP BETWEEN C-10 AND C-11, IF SIGNAL LINE BREAK SWITCH IS NOT USED.
10.	SPARE LEADS FROM F-18 AND U-18 ARE RESERVED FOR POLAR OPERATION OF KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATORS.
11.	TERMINALS C-143 TO C-148 ARE RESERVED FOR CABINET LAMP OPERATION.
12.	TERMINALS C1-C3 RESERVED FOR CUSTOMER USE.
13.	TERMINALS C-121 - C-122 RESERVED FOR PERFORATOR LOW-TAPE SWITCH.
14.	CONTACTS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITION.
15.	WHEN LBXD IS USED IN PLACE OF LXD, MAKE THE FOLLOWING CHANGES: OMIT CONNECTIONS ADD CONNECTIONS C-142 TO C-150 C-131 TO C-132
16.	WHEN LXD5 IS USED, REMOVE THE STRAP BETWEEN TERMINALS C-135 - C-136. ADD TWO STRAPS, ONE BETWEEN TERMINALS C-23 - C-135 AND ONE BETWEEN C-24 -C-136
17.	WHEN THE LXD 11 IS USED DO NOT INSTALL STRAPS BETWEEN TERMINALS C141 AND C142 OR C131 AND C132. THE INTERNAL CLUTCH MAGNET INPUT SHOULD BE CONNECTED TO TERMINALS C132 & C141. RESISTANCE PER COIL 810 OHMS.

Table to note 5:

SIGNAL LINE CURRENT	CONNECTIONS REMOVED	CONNECTIONS ADDED
.020 AMP.	K1-K2, J ① 1-J ① 2	J ① 3-J ① 4

NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.



3292WD

REVISIONS

ISSUE	DATE	AUTH. NO.
14	3-28-62	69762-1
15	2-11-64	79910
16	8-28-64	82637
17	10-26-64	83790
18	2-26-65	86062
19	4-7-66	90222

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 1

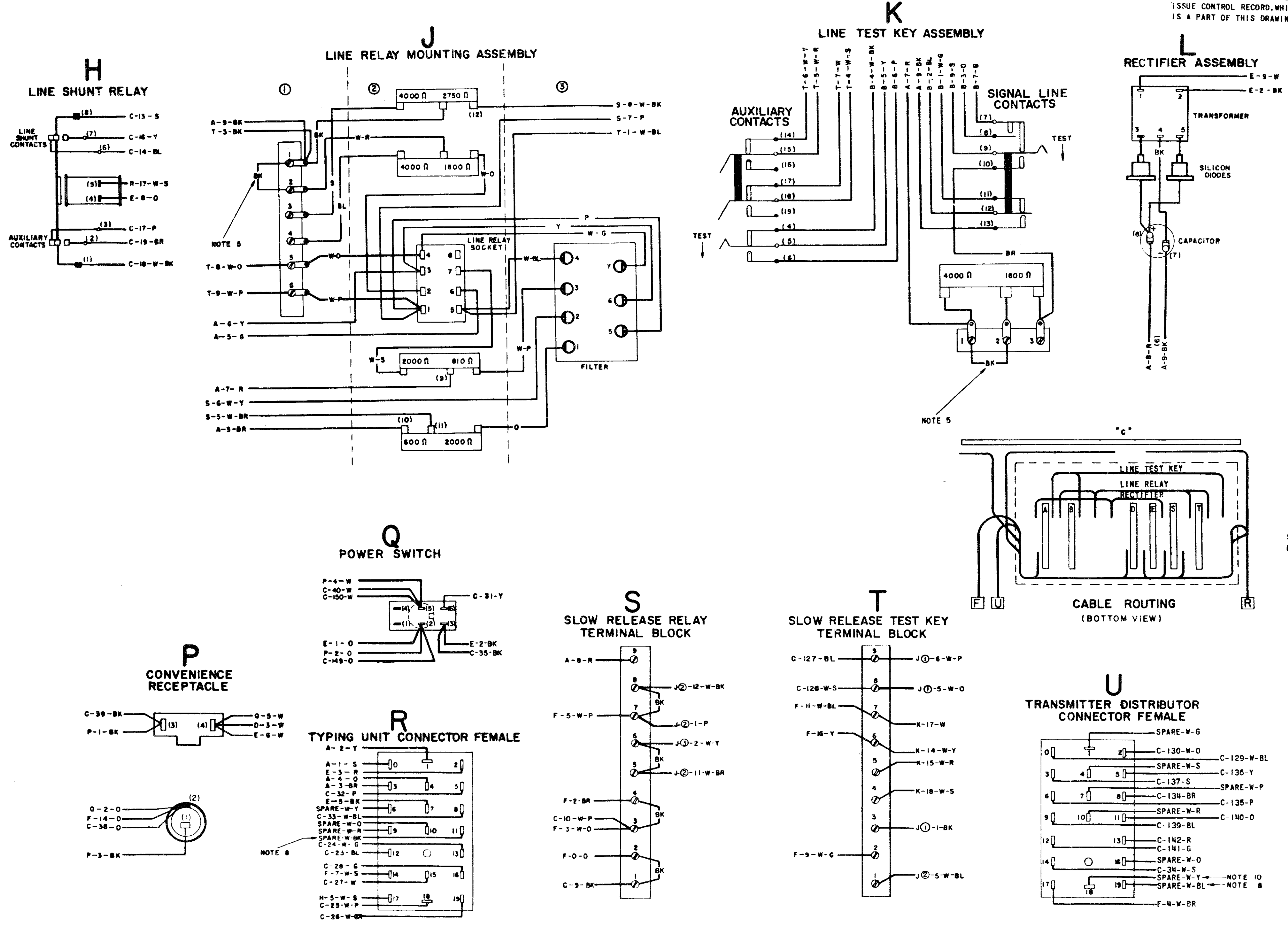
ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR - GP - OPT. IAC
LESU13

APPROVALS	
D AND R	E OF M
------	------
E-NUMBER	
PROD. NO. 3292WD	
DATE 10-10-56	
R.D. FILE NO. 27-A.65.AA	
DRAWN E.K.S.	CHKD. R.D.
ENGD. H.S.P.	APPD.

TELETYPE
CORPORATION

3292WD

SEE SHEET 1 FOR NOTES.



NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

3292WD

REVISIONS

ISSUE	DATE	AUTH. NO.
14	3-28-62	69762-1
15	2-11-64	79910
16	8-28-64	82637
17	10-26-64	83790
18	2-26-65	86062
19	4-7-66	90222

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.
SHEET 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR - GP - OPT. IAC
LESU13

APPROVALS

D AND R	E OF M
-------	------

E-NUMBER
PROD. NO. 3292WD
DATE 10-10-56
P.D. FILE NO. 27-A.65.AA
DRAWN E.K.S. CHKD. R.D.
ENGD. H.S.P. APPD.

TELETYPE
CORPORATION

3292WD

19

3294WD

NOTES

1. FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:

WD NO.	UNITS DIRECTLY OPERABLE WITH LESU
3264WD	CABINETS-LAAC209,210
3292WD	ELECTRICAL SERVICE UNIT LESU13
3302WD	KEYBOARDS-LAK4
2900WD	MOTOR UNITS-LMU12 OR 14.
2864WD	PAGE TYPING UNITS-LP
3300WD	TRANSMITTER DISTRIBUTOR-LXD3
3288WD	TRANSMITTER DISTRIBUTOR-LAXD 3 & LCXD1
3251WD	TRANSMITTER DISTRIBUTOR-LBXD5
3452WD	TRANSMITTER DISTRIBUTOR BASE -LCXB7

2. LEGEND:
   - ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU)
   - ○ B LINE TEST KEY TERMINAL BLOCK (IN LESU)
   - ○ C CABINET TERMINAL BLOCK
   - ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU)
   - ○ E POWER TERMINAL BLOCK (IN LESU)
   - « F KEYBOARD CONNECTOR
   - ○ J 1 TERMINAL STRIP (ON LINE RELAY ASSEMBLY IN LESU)
   - « J 2 LINE RELAY CONNECTOR (IN LESU)
   - ● J 3 LINE RELAY FILTER(IN LESU)
   - ○ K TERMINAL STRIP (ON LINE TEST KEY IN LESU)
   - « R TYPING UNIT CONNECTOR
   - ○ S SLOW RELEASE RELAY TERMINAL BOARD(IN LESU)
   - ○ T TEST SWITCH TERMINAL BOARD (IN LESU)
   - « U TRANSMITTER DISTRIBUTOR CONNECTOR
   - ○ AG MOTOR TERMINAL BLOCK(ON LAK)
   - ○ AH AUXILIARY SWITCH TERMINAL BLOCK (ON LAK)
   - « Z TRANSMITTER DISTRIBUTOR CONN (LBXD).

3. DOT DASH(---) LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.

4. ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITION.

5. A. RESISTANCE IN OHMS (Ω)
   B. INDUCTANCE VALUES IN MICROHENRIES(MH)
   C. CAPACITANCE VALUES IN MICROFARADS(MF)

6. CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION, FOR .020 AMP. LINE CURRENT, ADD DASHED (——) CONNECTIONS AND OMIT CONNECTIONS MARKED (*) IN LINE TEST KEY, AND LINE RELAY CIRCUITS.

7. USE POWER & SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV.-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE.
   FOR OTHER INSTALLATIONS OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECTLY TO TERMINALS SHOWN.

8. USE SYNCHRONOUS MOTOR ON REGULATED 60~ (± 1%) AC POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~ UNREGULATED AC.

9. RECTIFIER SHOWN CONTROLLED BY POWER SWITCH.
   FOR CONTINUOUS OPERATION, MOVE RECTIFIER LEAD L2 FROM E2 TO E1.

10. A. TO OPERATE MOTOR CONTROL, SET MUST BE EQUIPPED WITH EITHER
    1. TIME DELAY MECH. OR
    2. MOTOR STOP CONTACTS
    B IF TAPE POSITION IS TO BE USED IN THE ASR SET THE TIME DELAY MECHANISM MUST BE EITHER ELECTRICALLY OR MECHANICALLY DISABLED.

11. A. LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHOWN SHUNTING LINE RELAY COIL, TRANS. DIST. SIG. GENERATOR AND KEYBOARD SIG. GEN.
    B. IF KEYBOARD SHUNTING IS NOT DESIRED MOVE STRAP FROM C10 TO C9.
    C. FOR DIRECT CONTROL OF LINE SHUNT RELAY FROM POWER SWITCH, ADD DASHED (— — —) CONNECTIONS AND OMIT CONN. MARKED (*) AT CABINET TERMINALS C34, C35. C37. CUSTOMER MAY THEN SELECT PORTION OF SIG. LINE CKT. TO BE SHUNTED BY CONNECTING TERM. C13 TO EITHER C9, C10, C11, C15.

12. CIRCUIT SHOWS BOTH HORIZONTAL TABULATOR AND FORM START CONTROL USED ON TYPING UNIT. WHEN ONLY ONE CONTROL IS USED, OMIT CONNECTION MARKED (—✕—) AND ADD PROPER DASHED (----) CONNECTION IN TYPING UNIT CIRCUITS.

13. FORM PAPER OUT ALARM CONTACTS MAY BE MOUNTED ON EITHER THE TYPING UNIT OR EXTERNAL TO THE CABINET. IN LATTER EVENT, CONNECTIONS ARE MADE DIRECTLY TO TERMINALS C25 AND C26.

14. WHEN PAPER FEED OUT SWITCH IS NOT USED DISCONNECT MOTOR LEAD FROM AG3 AND CONNECT TO AG1.

15. WHEN SIGNAL LINE BREAK SWITCH IS NOT USED IN KEYBOARD ADD DASHED (----) CONNECTION AT CABINET TERMINAL BLOCK BETWEEN C10 AND C11.

16. IN ALL TRANS. DIST. U14 MUST BE CONNECTED TO U17 EXCEPT FOR LXD4 AND UP. (SEE NOTE 25)

17. IN ALL KEYBOARDS F4 MUST BE CONNECTED TO F7.
    IN ALL TYPING UNITS R14 MUST BE CONNECTED TO R17.

18 SPARE LEADS FROM U18 AND F18 ARE RESERVED FOR POLAR OPERATION OF SIGNAL GENERATOR.

19. CIRCUIT SHOWN FOR 115V DC POWER INPUT TO TRANS. DIST. CLUTCH MAGNETS. FOR 48V DC POWER INPUT MOVE WIRE CONNECTIONS AS FOLLOWS:

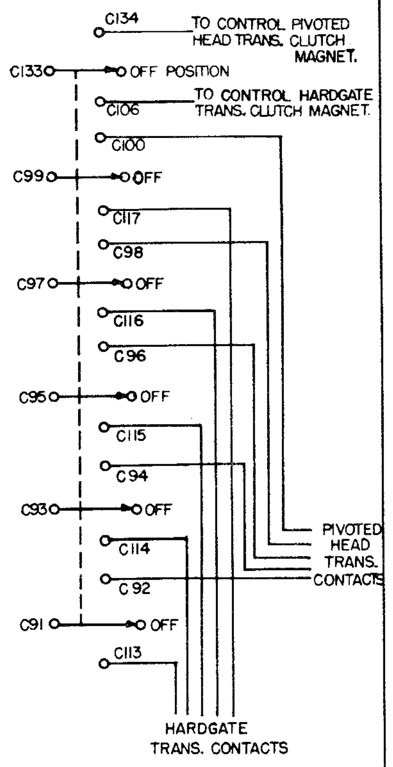
UNIT	WIRE INVOLVED	MOVE CONN. FROM	TO
LAXD +	C81 TO V6	V6	V5
LCXD	C142 TO V3	V3	V2
LBXD	A13 10 V6	V6	V5
	A6 TO V3	V3	V2

    POWER SUPPLY MUST DELIVER 300MA @ 48V DC OR 200MA @ 115V DC.

20. USE APPROPRIATELY LABELED LXD, LAXD, LBXD OR LCXD CIRCUITRY AND MAKE CONN. AS SHOWN.

21. CUSTOMER MUST SUPPLY EXTERNAL SWITCHING AS FOLLOWS:
    LXD - NONE
    LAXD - BETWEEN C133 AND C134
    TO CONTROL TRANS. CLUTCH MAGNET
    LBXD - NONE
    (CONTINUED)

21. CONTINUED
    LCXD - AS PER DIAGRAM BELOW LEVER KEY SWITCH
    6 NORMAL OPEN CONTACTS ON EACH SIDE

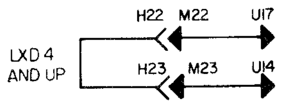

C134
TO CONTROL PIVOTED HEAD TRANS. CLUTCH MAGNET.
C133
OFF POSITION
TO CONTROL HARDGATE TRANS. CLUTCH MAGNET.
C106
C100
C99
OFF
C117
C98
C97
OFF
C116
C96
C95
OFF
C115
C94
C93
OFF
C114
C92
C91
OFF
C113
PIVOTED HEAD TRANS. CONTACTS
HARDGATE TRANS. CONTACTS

22. WHEN A SEPARATE TIGHT SWITCH IS USED IN LBXD THIS SWITCH BECOMES A MANUAL ON-OFF SWITCH ONLY.

23. WHEN LXD5 IS USED, REMOVE THE STRAP BETWEEN TERMINALS C135-C136. ADD TWO 176162 STRAPS, ONE BETWEEN TERMINALS C23-C135 AND ONE BETWEEN C24-C136.

24. TO CONTROL PIVOTED READER FROM ITS TAPE-OUT CONTACTS, REMOVE THE STRAP FROM TERMINALS 137 TO 141 AND PROVIDE SUIT-CIRCUITRY. THE TAPE OUT C NTACTS MAY NOT BE USED DIRECTLY SINCE THEY OPEN MOMENTARILY.

25. U14 IS CONNECTED TO U17 THROUGH THE TRANS. DIST.



26. CUSTOMER MUST SUPPLY THIS SWITCH WHEN EXTERNAL SWITCHING IS NOT USED.

27. CUSTOMER MUST SUPPLY THESE STRAPS WHEN EXTERNAL SWITCHING IS NOT USED.

28. WHEN THE LXD11 IS USED DO NOT INSTALL STRAPS BETWEEN TERMINAL C141 AND C142, OR C131 AND C132. THE INTERNAL CLUTCH MAGNET INPUT SHOULD BE CONNECTED TO TERMINALS C132 AND C141. RESISTANCE PER COIL 210 OHMS.

REVISIONS

ISSUE	DATE	AUTH. NO.
Q	3-30-60	28-12924
R	4-21-60	28-12936
S18	10-12-60	28-14077
T19	4-15-61	68761-33
U20	4-26-61	69589
21	3-28-62	69768-33
22	11-26-63	78875
23	2-11-64	79910
24	8-28-64	82637

SHEET 1 OF 6

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
ASR-GP-OPT 1 AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU13
AND ASSOCIATED
UNITS

APPROVALS	
D AND R	E OF M
HJK	

E-NUMBER
PROD. NO. 3294WD
DATE 11-17-59
P.D. FILE NO. 27-A65AA
DRAWN A.C. CHKD.
ENGD. APPD.

TELETYPE
CORPORATION

24

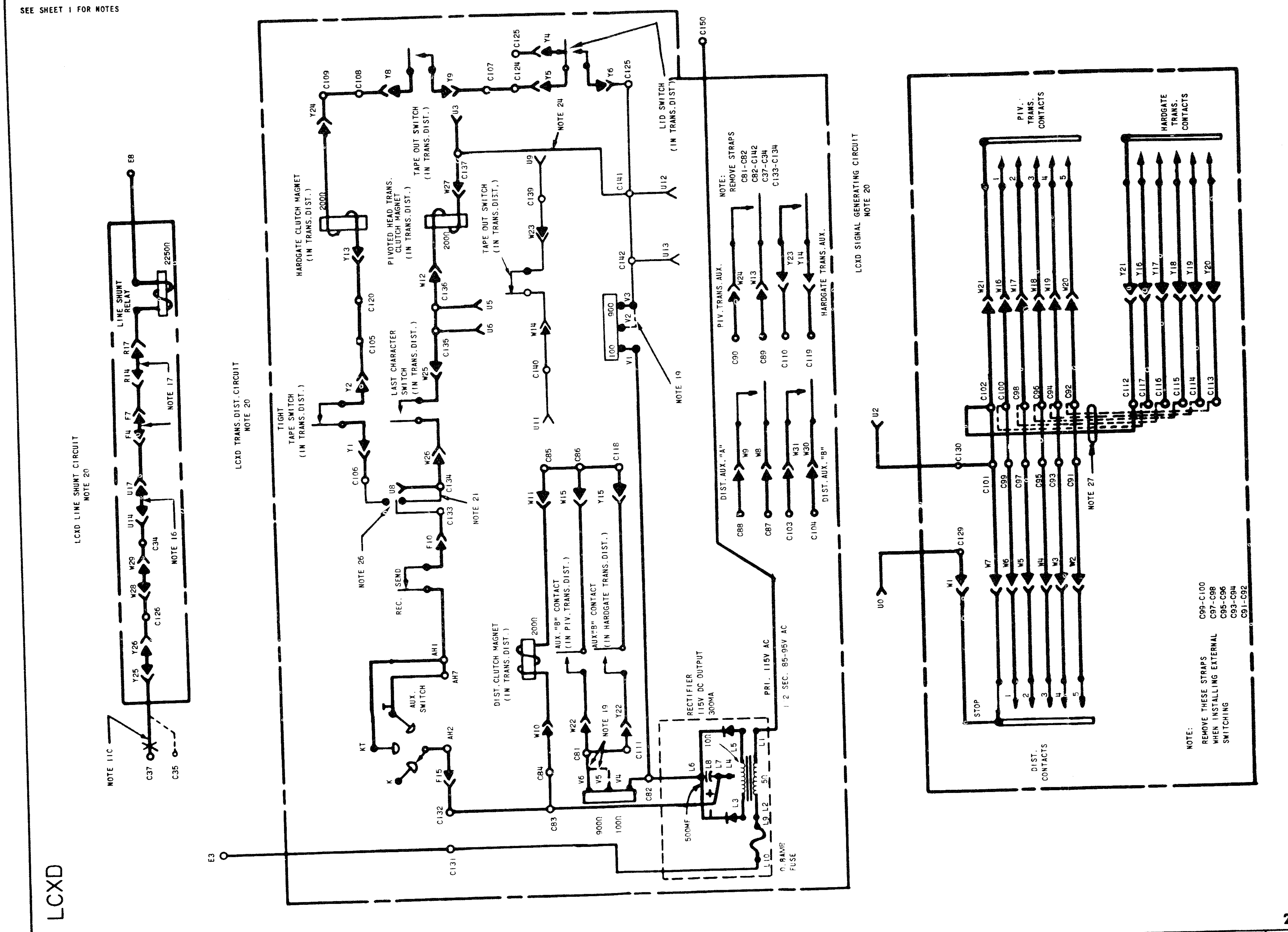
3294WD

3294WD

REVISIONS

ISSUE	DATE	AUTH. NO.
Q	3-30-60	28-12924
R	4-21-60	28-12936
S18	10-12-60	28-14077
T19		68761-33
U20		
21	3-28-62	69768-10
22	11-26-63	78875
23	2-11-64	79910
24	8-28-64	82637

SEE SHEET 1 FOR NOTES



LCXD

SHEET 2 OF 6

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
ASR-GP-OPT 1 AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU13
AND ASSOCIATED
UNITS

APPROVALS	
D AND R	E OF M

E-NUMBER

PROD. NO. 3294WD

DATE 11-17-59

P.D. FILE NO. 27-A65AA

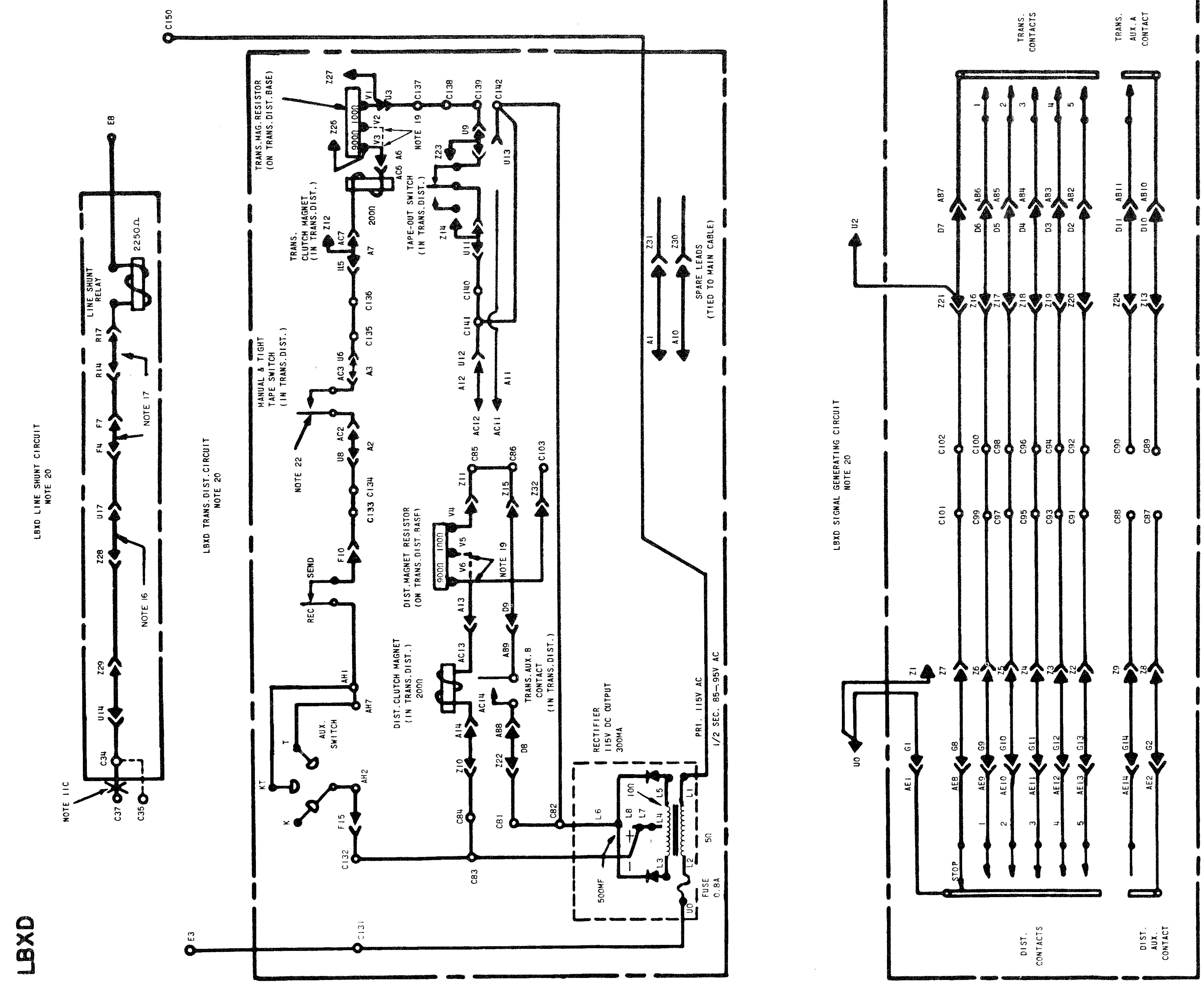
DRAWN A.C.	CHKD.
ENGD.	APPD.

TELETYPE
CORPORATION

24

3294WD

SEE SHEET 1 FOR NOTES.


LBXD LINE SHUNT CIRCUIT NOTE 20
LINE SHUNT RELAY
2250Ω
NOTE 17
NOTE 16
NOTE 11C
LBXD TRANS. DIST. CIRCUIT NOTE 20
TRANS. MAG. RESISTOR (ON TRANS. DIST. BASE)
TRANS. CLUTCH MAGNET (IN TRANS. DIST.)
200Ω
TAPE-OUT SWITCH (IN TRANS. DIST.)
NOTE 19
MANUAL & TIGHT TAPE SWITCH (IN TRANS. DIST.)
NOTE 22
SEND
REC
AUX. SWITCH
DIST. MAGNET RESISTOR (ON TRANS. DIST. BASE)
DIST. CLUTCH MAGNET (IN TRANS. DIST.) 200Ω
TRANS. AUX. B CONTACT (IN TRANS. DIST.)
RECTIFIER 115V DC OUTPUT 300MA
PRI. 115V AC
1/2 SEC. 85-95V AC
500MF
10Ω
5Ω
FUSE 0.8A
SPARE LEADS (TIED TO MAIN CABLE)
LBXD SIGNAL GENERATING CIRCUIT NOTE 20
TRANS. CONTACTS
TRANS. AUX. A CONTACT
DIST. CONTACTS
DIST. AUX. CONTACT
STOP
LBXD

SHEET 3 OF 6

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
ASR-GP-OPT 1 AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU13
AND ASSOCIATED
UNITS

3294WD

REVISIONS

ISSUE	DATE	AUTH. NO.
Q	3-30-60	28-12924
R	4-21-60	28-12936
S18	10-12-60	28-14077
T19		68761-33
U20		
21	3-28-62	69768-10
22	11-26-63	78875
23	2-11-64	79910
24	8-28-64	82637

APPROVALS

D AND R	E OF M
AJK	

E-NUMBER

PROD. NO. 3294WD

DATE 11-17-59

P.D. FILE NO. 27-A65AA

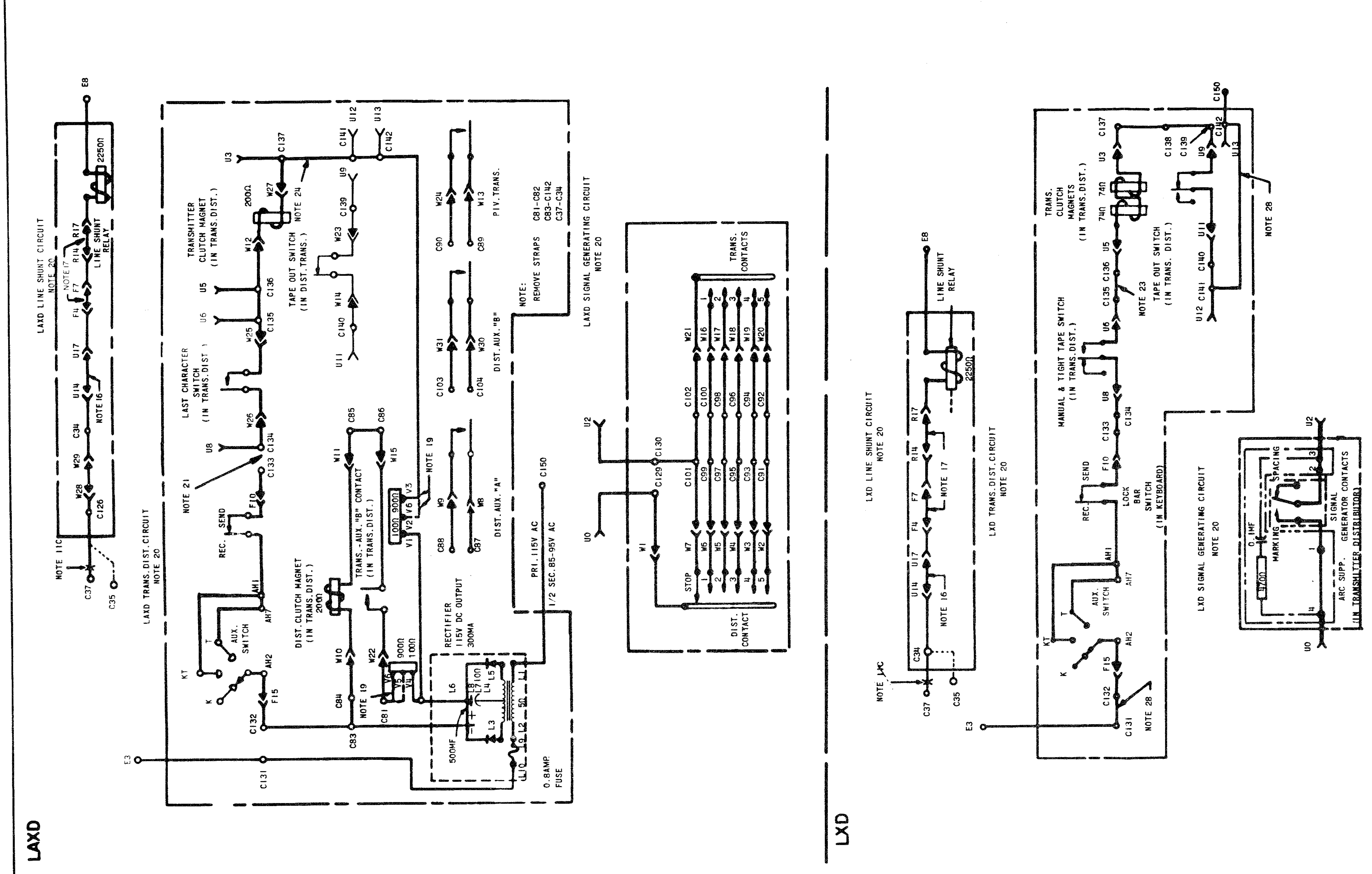
DRAWN A.C.	**CHKD.**
ENGD.	**APPD.**

TELETYPE
CORPORATION

24

3294WD

SEE SHEET 1 FOR NOTES



3294WD

REVISIONS

ISSUE	DATE	AUTH. NO.
Q	3-30-60	28-12924
R	4-21-60	28-12936
S18	10-12-60	28-14077
T19	4-5-61	68761-33
U20		
21	3-28-62	69768-10
22	11-26-63	78875
23	2-11-64	79910
24	8-28-64	82637

SHEET 4 OF 6

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
ASR-GP-OPT I AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU13
AND ASSOCIATED
UNITS

APPROVALS

D AND R	E OF M
HJK	

E-NUMBER

PROD. NO. 3294WD

DATE 11-17-59

P.D. FILE NO. 27-A65AA

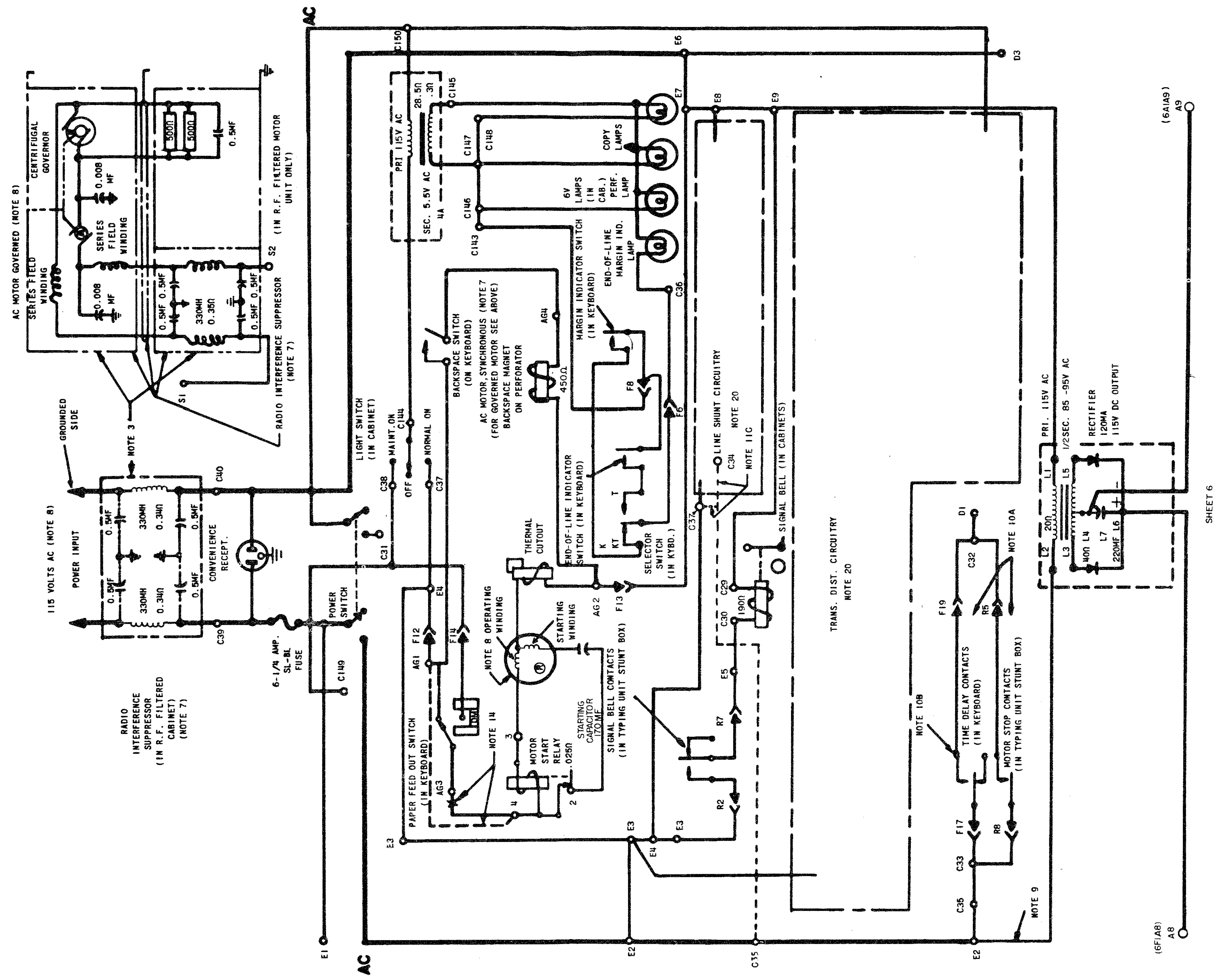
DRAWN A.C.	**CHKD.**
ENGD.	**APPD.**

TELETYPE
CORPORATION

24

3294WD

SEE SHEET 1 FOR NOTES


AC
C150
E6
D3
AC MOTOR GOVERNED (NOTE 8)
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
0.008 MF
500Ω
0.5MF
330MH
0.35Ω
S2
S1
RADIO INTERFERENCE SUPPRESSOR (NOTE 7)
(IN R.F. FILTERED MOTOR UNIT ONLY)
GROUNDED SIDE
NOTE 3
C40
C39
115 VOLTS AC (NOTE 8)
POWER INPUT
0.34Ω
CONVENIENCE RECEPT.
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
6-1/4 AMP. SL-BL FUSE
POWER SWITCH
C149
C31
LIGHT SWITCH (IN CABINET)
MAINT.ON
OFF
NORMAL ON
C144
C38
C37
PRI 115V AC
28.5Ω
.3Ω
SEC. 5.5V AC 4A
C145
C147
C148
C146
C143
6V LAMPS (IN CAB.)
COPY LAMPS
PERF. LAMP
END-OF-LINE MARGIN IND. LAMP
E7
E8
E9
C36
BACKSPACE SWITCH (ON KEYBOARD)
AC MOTOR, SYNCHRONOUS (NOTE 7 (FOR GOVERNED MOTOR SEE ABOVE)
BACKSPACE MAGNET ON PERFORATOR
AG4
450Ω
MARGIN INDICATOR SWITCH (IN KEYBOARD)
F8
F6
END-OF-LINE INDICATOR SWITCH (IN KEYBOARD)
T
K
KT
SELECTOR SWITCH (IN KYBD.)
THERMAL CUTOUT
E4
AG2
F13
F12
F14
AG1
NOTE 8 OPERATING WINDING
STARTING WINDING
STARTING CAPACITOR 170 MF
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
NOTE 14
PAPER FEED OUT SWITCH (IN KEYBOARD)
AG3
MOTOR START RELAY .025Ω
3
4
2
E3
E1
AC
E2
LINE SHUNT CIRCUITRY
NOTE 20
C34
NOTE 11C
C37
SIGNAL BELL (IN CABINETS)
C29
C30
190Ω
E5
R7
R2
C15
TRANS. DIST. CIRCUITRY NOTE 20
D1
C32
NOTE 10A
NOTE 10B
F19
R5
TIME DELAY CONTACTS (IN KEYBOARD)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
F17
R8
C33
C35
NOTE 9
PRI. 115V AC
1/2SEC. 85-95V AC
L1
L5
L2
L3
20Ω
40Ω L4
L7
220MF L6
RECTIFIER 120MA 115V DC OUTPUT
(6A1A9) A9
(6F1A8) A8
SHEET 6

ISSUE	DATE	AUTH. NO.
Q	3-30-60	28-12924
R	4-21-60	28-12936
S18	10-12-60	28-14077
T19	4- -61	68761-33
U20		
21	3-28-62	69768-10
22	11-26-63	78875
23	2-11-64	79910
24	8-28-64	82637

SHEET 5 OF 6

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
ASR-GP-OPT I AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU13
AND ASSOCIATED
UNITS

APPROVALS

D AND R	E OF M
HJK	

E-NUMBER

PROD. NO. 3294WD

DATE 11-17-59

P.D. FILE NO. 27-A65AA

DRAWN A.C.	CHKD.
ENGD.	APPD.

TELETYPE
CORPORATION

3294WD

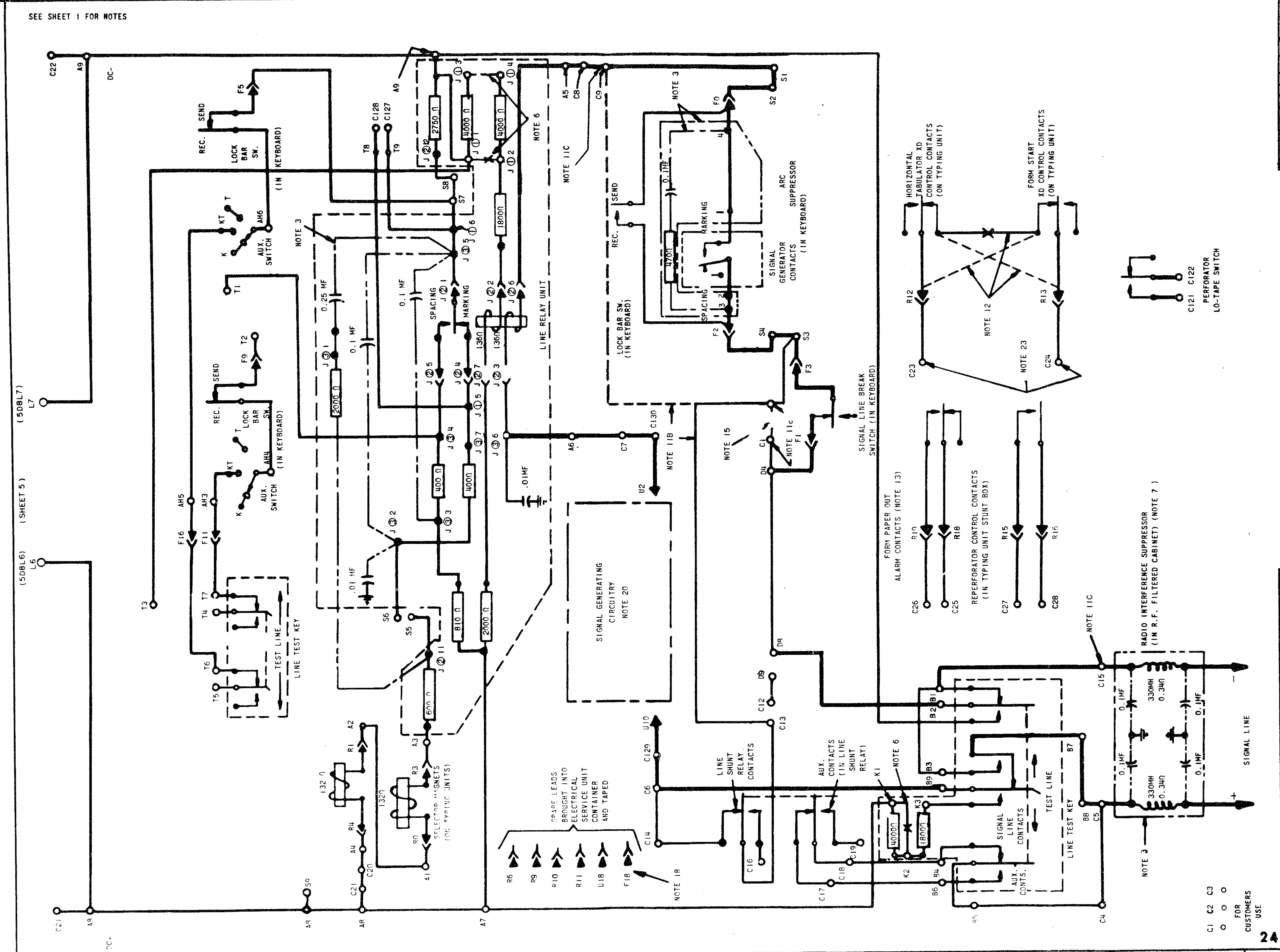
24

3294WD

REVISIONS

ISSUE	DATE	AUTH. NO.
Q	3-30-60	28-12924
R	4-21-60	28-12936
S18	10-12-60	28-14077
T19	4- -61	68761-33
W20		
21	3 -28-62	69768-10
22	11-26-63	78875
23	2 11-64	79910
24	8-28-64	82637

SEE SHEET 1 FOR NOTES



SHEET 6 OF 6

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
ASR-GP-OPT I AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU13
AND ASSOCIATED
UNITS

APPROVALS

D AND R	E OF M
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E-NUMBER

PROD. NO. 3294WD

DATE 11-17-59

P.D. FILE NO. 27-A65AA

DRAWN A.C.	CHKD.
ENGD.	APPD.

TELETYPE
CORPORATION

24

3294WD

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

ISSUE CONTROL RECORD

SHEET NO.	ISSUE 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	☒	☒	☒	☒	☒	☒	☒	☒	☒									
2	☒	☒	☒	☒	☒	☒	☒	☒	☒									
3	☒	☒	☒	☒	☒	☒	☒	☒	☒									

3296WD

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
1	4-13-66	88100-1
2	8-3-66	88100-2

ISSUE CONTROL
SHEET 1 OF 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
GP-OPT II-AC
LESU 15

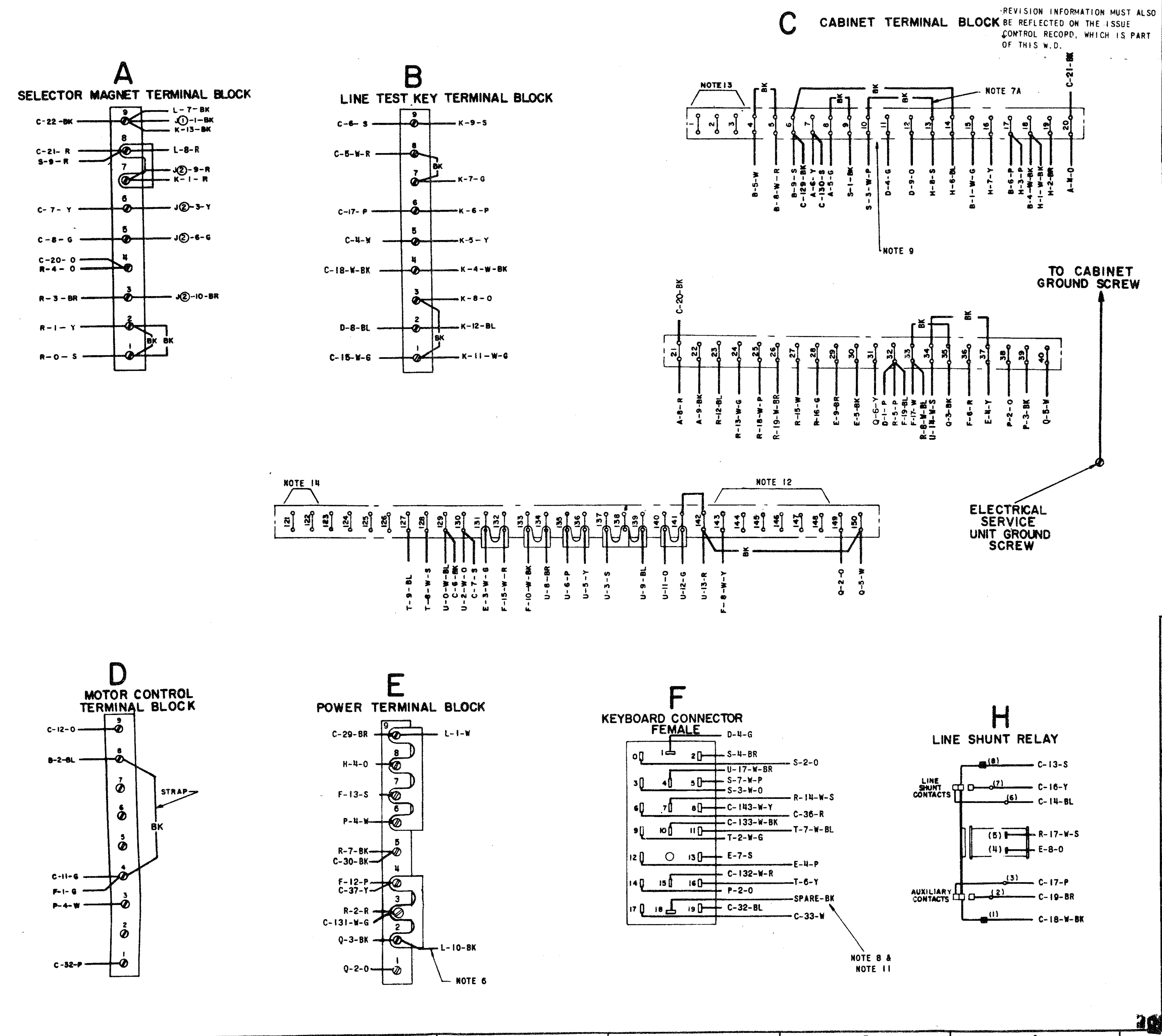
WD NUMBER 3296 WD	
DRAWN	CHKD.
ENGD. J.C.T.	APPD.

TELETYPE
CORPORATION

3296WD

TC 482 (1-66) SEE R&D ROUTINE #5

NO.	NOTES
1.	WIRING LEGEND: A-1-W-BL A — DISTANT TERMINATING AREA 1 — DISTANT TERMINATING DESIGNATION W-BL — WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK G - GREEN BR - BROWN BL - BLUE R - RED P - PURPLE O - ORANGE W - WHITE Y - YELLOW S - SLATE
3.	UNIT WIRED FOR 115 VOLTS. 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
4.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION, REMOVE AND ADD CONNECTIONS AS TABULATED BELOW: SIGNAL LINE CURRENT / CONNECTIONS REMOVED / CONNECTIONS ADDED .020 AMP. / K1-K2, J①1-J①2 / J①3-J①4
6.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. A. FOR CONTINUOUS OPERATION, REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-1.
7.	LINE SHUNT RELAY SHOWN SHUNTING LINE LINE RELAY COIL AND KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATOR. A. IF KEYBOARD SHUNTING IS NOT DESIRED, OR WHEN SIGNAL LINE BREAK SWITCH IS PRESENT, REMOVE THE BLACK STRAP CONNECTED BETWEEN TERMINALS C-10 AND C-13 AND CONNECT TERMINALS C-9 AND C-13.
8.	THE SPARE LEADS FROM THE KEYBOARD AND TRANSMITTER DISTRIBUTOR UNITS CONNECTORS ARE TERMINATED IN THE RIGHT END OF THE ELECTRICAL SERVICE UNIT. THE SPARE LEADS FROM THE TYPING UNIT CONNECTOR ARE TERMINATED IN THE LEFT END OF THE ELECTRICAL SERVICE UNIT.
9.	ADD STRAP BETWEEN C-10 AND C-11, IF SIGNAL LINE BREAK SWITCH IS NOT USED.
10.	TO PREVENT SLOW RELEASE RELAY FROM OPERATING, REMOVE STRAP CONNECTING T-3, T-4 AND T-5.
11.	SPARE LEADS FROM F-18 AND U-18 ARE RESERVED FOR POLAR OPERATION OF KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATORS.
12.	TERMINALS C-143, C-148 RESERVED FOR CABINET LAMP OPERATION.
13.	TERMINALS C-1 - C-3 RESERVED FOR CUSTOMER'S USE.
14.	TERMINALS C-121 - C-122 RESERVED FOR PERFORATOR LOW-TAPE SWITCH.
15.	CONTACTS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITION.



NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS PART OF THIS W.D.

3296 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	1-6-59	28-10286
B	5-20-59	28-11103
C	6-18-59	28-10488-1
5	8-4-59	28-11508
6	3-20-61	69286
7	5-31-61	69920
8	3-28-62	69768-10
9	7-29-65	88100
10	4-13-66	88100-1

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR - GP - OPT II - AC
LESU15

APPROVALS

D AND R	E OF M
------	------

E-NUMBER
PROD. NO. 3296WD
DATE 10-10-56
P.D. FILE NO. 27A.65AA
DRAWN R.W.D. CHKD.
ENGD. J.C.T. APPD.

TELETYPE
CORPORATION

3296 WD

SEE SHEET 1 FOR NOTES

NOTE:

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3296WD

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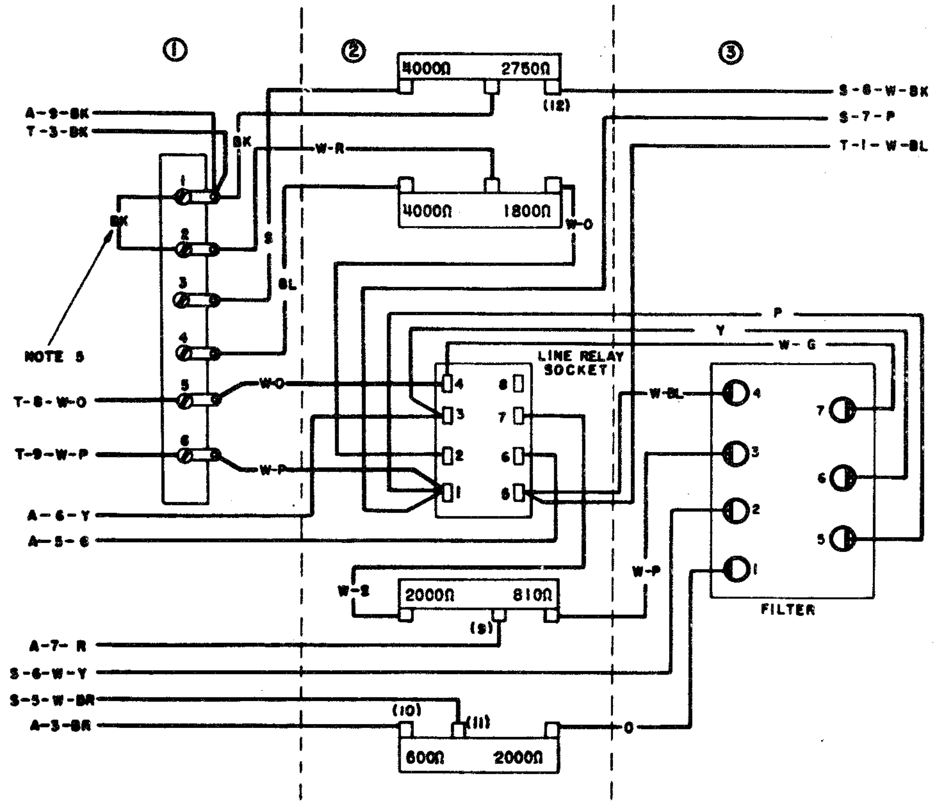
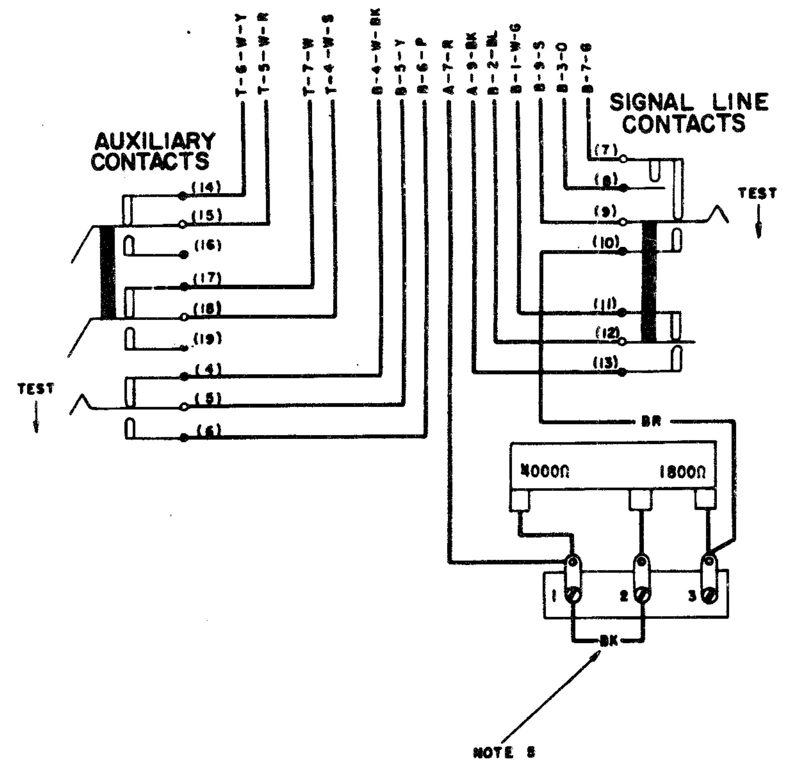
8	3-28-62	69768-10
9	7-29-65	88100
10	4-13-66	88100-1

J
LINE RELAY MOUNTING ASSEMBLY

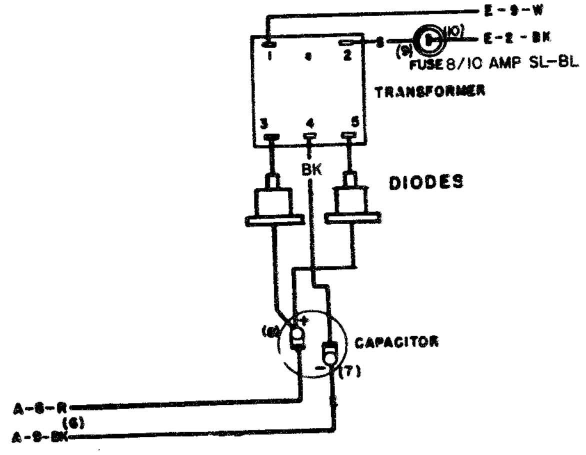


K
LINE TEST KEY ASSEMBLY

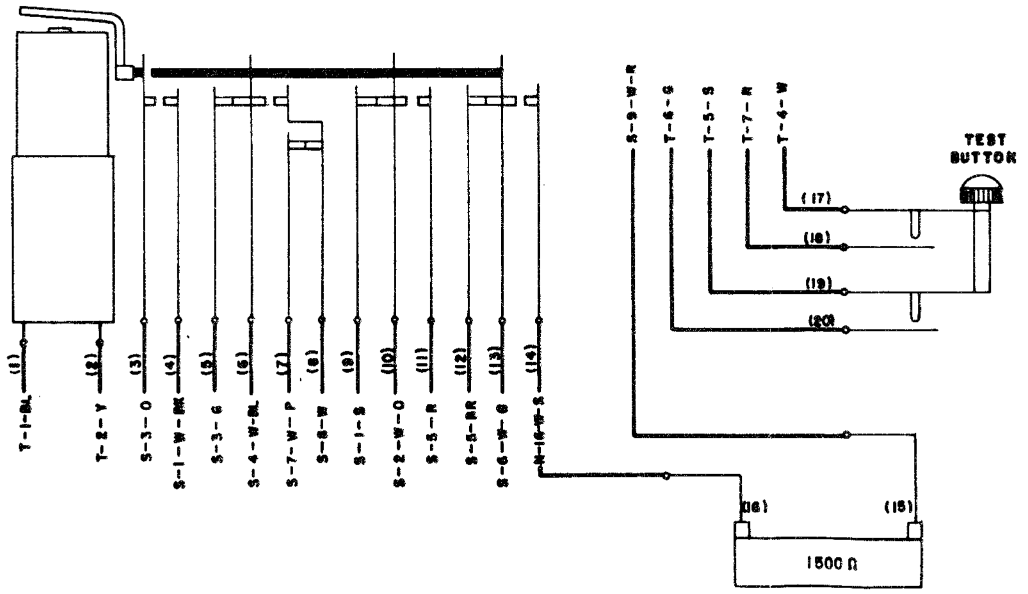


SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

L
RECTIFIER ASSEMBLY



N
SLOW RELEASE RELAY ASSEM.



SHEET 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR - SP - OPT II - AC
LESU16

APPROVALS

D AND R	E OF M

E-NUMBER
PROD. NO. 3296WD
DATE 10-10-56
P.D. FILE NO. 27A.65AA
DRAWN R.W.D. CHKD. R.D.
ENGD. J.C.T. APPD.

TELETYPE
CORPORATION

3296WD

10

SEE SHEET 1 FOR NOTES.

NOTE:
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3296WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	1-6-59	28-10286
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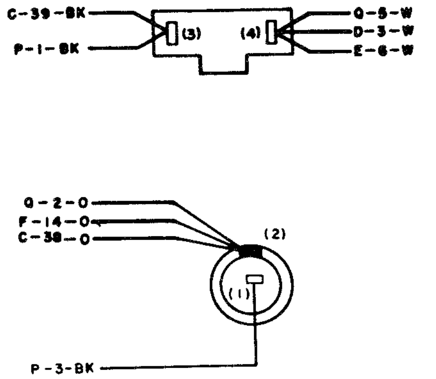
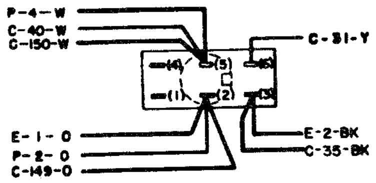
~~F~~ 7	5-31-61	69920
8	3-28-62	69768-10
9	7-29-65	88100
10	4-13-66	88100-1

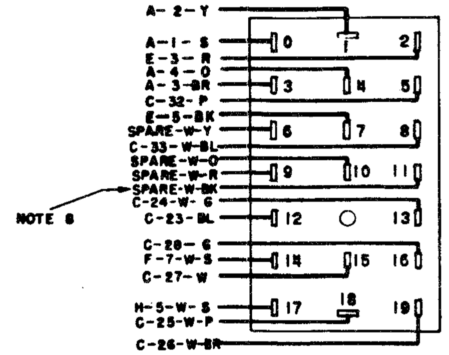
P
CONVENIENCE RECEPTACLE

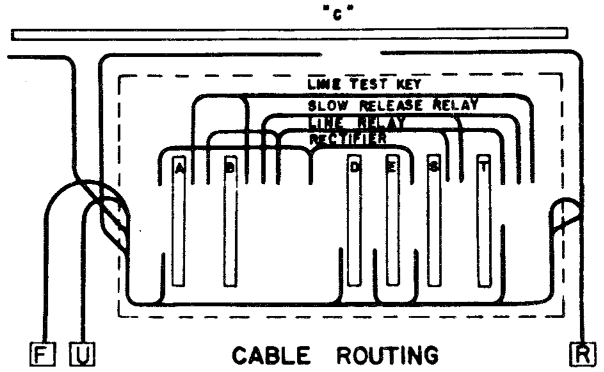


Q
POWER SWITCH



R
TYPING UNIT CONNECTOR FEMALE

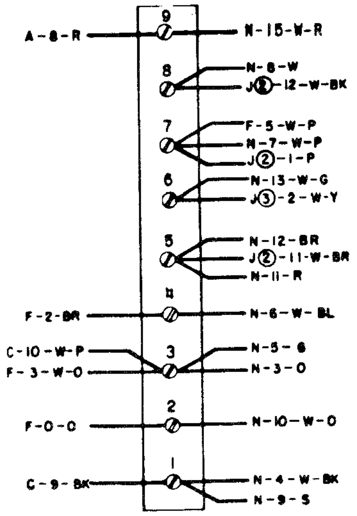




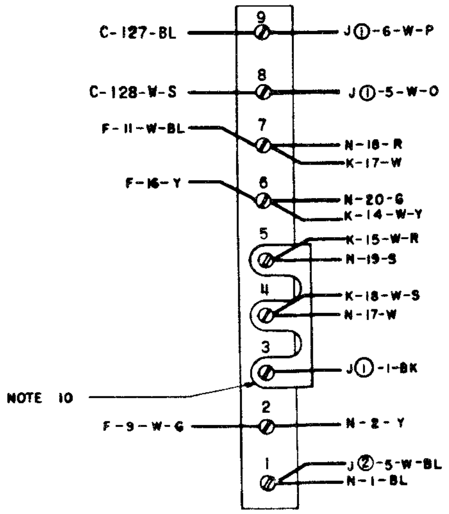
CABLE ROUTING
(BOTTOM VIEW)

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

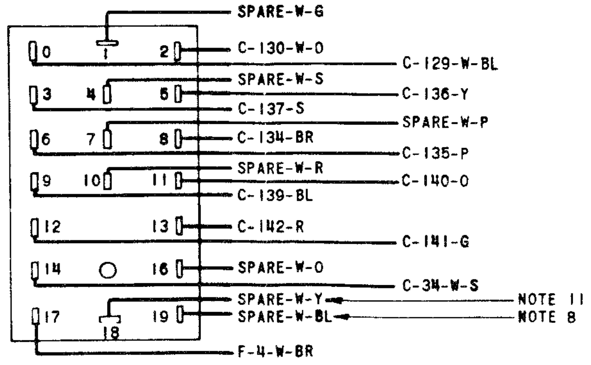
S
SLOW RELEASE RELAY TERMINAL BLOCK



T
SLOW RELEASE TEST KEY TERMINAL BLOCK



U
TRANSMITTER DISTRIBUTOR CONNECTOR FEMALE



SHEET 3

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR - GP - OPT II - AC
LESU15

APPROVALS	
D AND R	E OF M
--------	--------

E-NUMBER
PROD. NO. 3296WD
DATE 10-10-56
P.D. FILE NO. 27A 65AA

DRAWN R.W.D.	CHKD.
ENGD. J.C.T.	APPD.

TELETYPE
CORPORATION

10

3296WD

LXD TRANS. DIST. CIRCUIT NOTE 20
LINE SHUNT RELAY
LXD SIGNAL GENERATING CIRCUIT NOTE 20
SIGNAL GENERATOR CONTACTS (IN TRANSMITTER DISTRIBUTOR)
ARC SUPP
MARKING
SPACING
TRANS. CLUTCH MAGNETS (IN TRANS. DIST.)
MANUAL SWITCH (IN TRANS. DIST.)
TIGHT TAPE SWITCH (IN TRANS. DIST.)
TAPE OUT SWITCH (IN TRANS. DIST.)
LOCK BAR SWITCH (IN KEYBOARD)
AUX SWITCH
REC. SEND
A.C. MOTOR GOVERNED (NOTE 8)
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED MOTOR UNIT ONLY) (NOTE 7)
115 VOLTS A.C. (NOTE 8) POWER INPUT
GROUNDED SIDE
CONVENIENCE RECEPT.
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
6 1/4 AMP SLO-BL FUSE
POWER SWITCH
LIGHT SWITCH (IN CABINET)
MAINT. ON
NORMAL ON
OFF
BACKSPACE SWITCH (IN KEYBOARD)
A.C. MOTOR, SYNCHRONOUS (NOTE 8)
OPERATING WINDING
STARTING WINDING
THERMAL CUTOUT
STARTING CAPACITOR
MOTOR START RELAY
PAPER FEED OUT SWITCH (IN KEYBOARD)
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
MARGIN INDICATOR SWITCH (IN KEYBRD)
END-OF-LINE INDICATOR SWITCH
SELECTOR SWITCH (IN KEYBOARD)
6V LAMPS
COPY LAMPS
LINE SHUNT CIRCUITRY NOTE 20
SIGNAL BELL (IN CABINETS)
TRANS. DIST. CIRCUITRY NOTE 20
TIME DELAY CONTACTS (IN KEYBOARD)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
PRI. 115 V.A.C.
SEC. 85-95 V.A.C.
RECTIFIER 300 MA 115 D.C. OUTPUT
FUSE 0.8A
AC
DC−
DC+
SLOW RELEASE RELAY
SELECTOR MAGNETS (ON TYPING UNITS)
SLOW RELEASE RELAY TEST SWITCH
LINE TEST KEY
SLOW RELEASE RELAY CONTACTS
SPARE LEADS BROUGHT INTO ELECTRICAL SERVICE UNIT CONTAINER AND TAPED
SIGNAL GENERATING CIRCUITRY NOTE 20
LINE RELAY UNIT
LINE SHUNT RELAY CONTACTS
AUX CONTACTS (IN LINE SHUNT RELAY)
SIGNAL LINE CONTACTS
SIGNAL LINE BREAK SWITCH (IN KEYBOARD)
SIGNAL GENERATOR CONTACTS (IN KEYBOARD)
ARC SUPPRESSOR
SLOW RELEASE RELAY CONTACTS
HORIZONTAL TABULATOR KD CONTROL CONTACTS (ON TYPING UNIT)
FORM START KD CONTROL CONTACTS (ON TYPING UNIT)
PERFORATOR LO-TAPE SWITCH
FORM FEED PAPER OUT ALARM CONTACTS (NOTE 13)
REPERFORATOR CONTROL CONTACTS (IN TYPING UNIT STUNT BOX)
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
SIGNAL LINE
FOR CUSTOMERS USE

SEE SHEET 3 FOR NOTES

3298 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
E	3-30-60	28-12924
F	4-21-60	28-12936
G	5-29-61	69913
H	3-28-62	69768-10
J	11-26-63	78860
K/R2	2-11-64	79910

SHEET 1 OF 3

APPROVALS

SCHEMATIC
WIRING DIAGRAM
MODEL 28
ASR-GP-OPT II AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 15
AND ASSOCIATED
UNITS

E NUMBER
PROD. NO. 3298 WD
DATE: 11-17-59
P.D. FILE NO. 27-A65AA
DRAWN R.O. CHKD.
ENGD. APPD.

TELETYPE
CORPORATION

3298 WD

LCXD SIGNAL GENERATING CIRCUIT NOTE 20
LBXD LINE SHUNT CIRCUIT NOTE 20
LBXD TRANS. DIST. CIRCUIT NOTE 20
LBXD SIGNAL GENERATING CIRCUIT NOTE 20
LAXD LINE SHUNT CIRCUIT NOTE 20
LAXD TRANS. DIST. CIRCUIT NOTE 20
LAXD SIGNAL GENERATING CIRCUIT NOTE 20
LBXD
LAXD
DIST. CLUTCH MAGNET (IN TRANS. DIST.) 200Ω
TAPE OUT SWITCH (IN TRANS. DIST.)
LID SWITCH (IN TRANS. DIST.)
NOTE: REMOVE STRAPS C81-C82 C37-C34 C133-C134
PIV. TRANS. AUX.
HARDGATE TRANS. AUX.
DIST. AUX. "A"
DIST. AUX. "B"
RECTIFIER 115 V.D.C. OUTPUT 300 MA
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
0.8A FUSE
PIV. TRANS. CONTACTS
HARDGATE TRANS. CONTACTS
DIST. CONTACTS
NOTE: REMOVE STRAPS C99-C100 C97-C98 C95-C96 C93-C94 C91-C92
LINE SHUNT RELAY 2250Ω
TRANS. MAG. RESISTOR (ON TRANS. DIST. BASE)
TRANS. CLUTCH MAGNET (IN TRANS. DIST.) 200Ω
MANUAL & TIGHT TAPE SWITCH (IN TRANS. DIST.)
DIST. MAGNET RESISTOR (ON TRANS. DIST. BASE)
DIST. CLUTCH MAGNET (IN TRANS. DIST.) 200Ω
TRANS. AUX. B CONTACT
SPARE LEADS (TIED TO MAIN CABLE)
REC. SEND
AUX. SWITCH
TRANS. CONTACTS
TRANS. AUX. A CONTACT
DIST. AUX. CONTACT
TRANSMITTER CLUTCH MAGNET (IN TRANS. DIST.) 200Ω
LAST CHARACTER SWITCH (IN TRANS. DIST.)
TRANS. AUX. "B" CONTACT (IN TRANS. DIST.)
NOTE: REMOVE STRAPS C81-C82 C83-C142 C37-C34
PIV. TRANS.
STOP

ISSUE	DATE	AUTH. NO.
12	2-11-64	79910

3298 WD

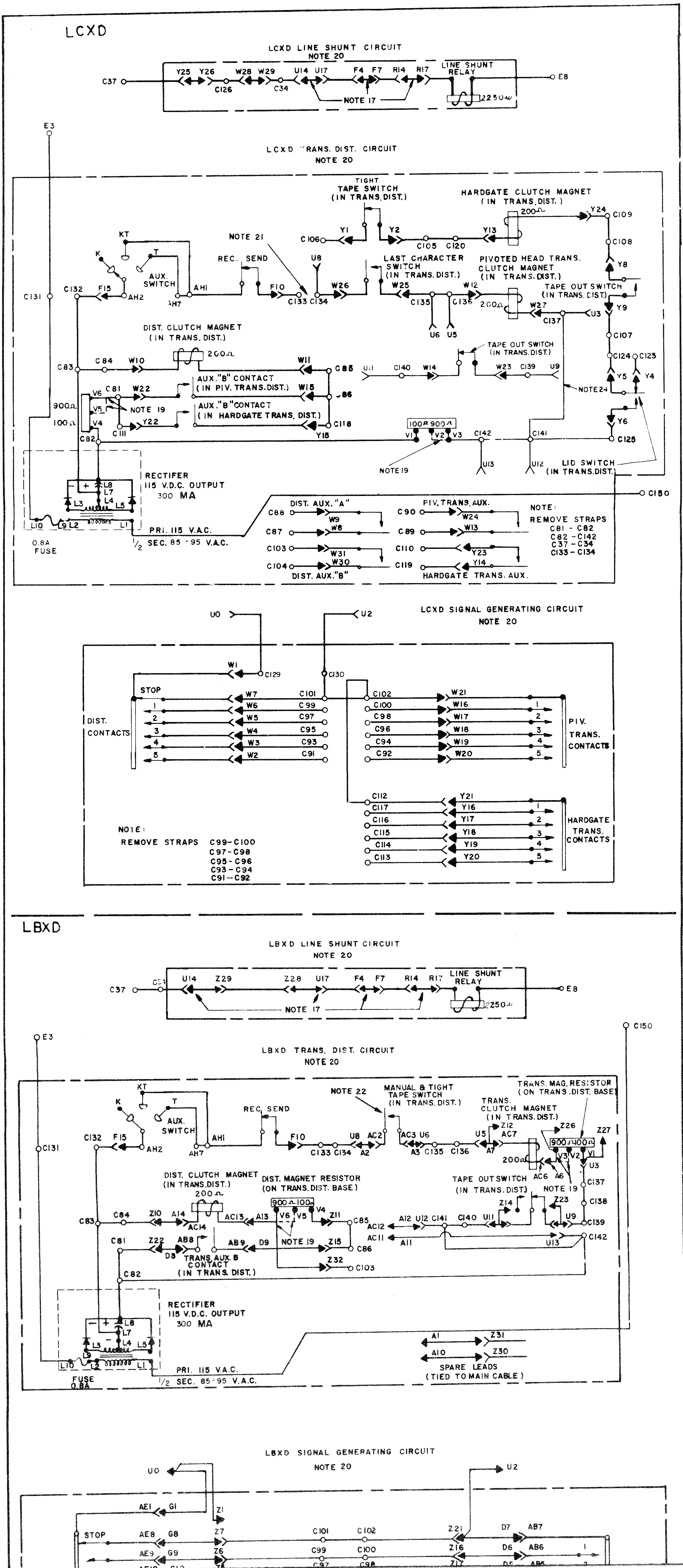
REVISIONS

SHEET 2 OF 3

SCHEMATIC
WIRING DIAGRAM
MODEL 28
ASR-GP-OPT II AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 15
AND ASSOCIATED
UNITS

TELETYPE
CORPORATION

3298 WD


LCXD
LCXD LINE SHUNT CIRCUIT
NOTE 20
C37
Y25 Y26 C126 W28 W29 C34 U14 U17 F4 F7 R14 R17
NOTE 17
LINE SHUNT RELAY
2250Ω
E8
E3
LCXD TRANS. DIST. CIRCUIT
NOTE 20
TIGHT TAPE SWITCH (IN TRANS. DIST.)
HARDGATE CLUTCH MAGNET (IN TRANS. DIST.)
200Ω
Y24 C109 C108 Y8
C106 Y1 Y2 C105 C120 Y13
KT K T AUX. SWITCH AH1 AH7 AH2
NOTE 21
REC. SEND
F10 C133 C134 U8 W26
LAST CHARACTER SWITCH (IN TRANS. DIST.)
W25 C135 C136 W12 U6 U5
PIVOTED HEAD TRANS. CLUTCH MAGNET (IN TRANS. DIST.)
200Ω
TAPE OUT SWITCH (IN TRANS. DIST.)
W27 C137 U3 Y9 C107 C124 C123 Y5 Y4
C131 C132 F15
DIST. CLUTCH MAGNET (IN TRANS. DIST.)
200Ω
C83 C84 W10 W11 C85
AUX. "B" CONTACT (IN PIV. TRANS. DIST.)
W15 C86
AUX. "B" CONTACT (IN HARDGATE TRANS. DIST.)
C118 Y15
V6 C81 W22 V5 NOTE 19 Y22 C111 V4
900Ω 100Ω C82
U11 C140 W14
TAPE OUT SWITCH (IN TRANS. DIST.)
W23 C139 U9
NOTE 24
Y6 C125
100Ω 900Ω V1 V2 V3 C142 C141
NOTE 19
U13 U12
LID SWITCH (IN TRANS. DIST.)
C150
RECTIFIER 115 V.D.C. OUTPUT 300 MA
L8 L7 L4 L3 L5 L10 L9 L2 L1
0.8A FUSE
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
DIST. AUX. "A"
C88 W9 C87 W8
C103 W31 C104 W30
DIST. AUX. "B"
PIV. TRANS. AUX.
C90 W24 C89 W13
C110 Y23 C119 Y14
HARDGATE TRANS. AUX.
NOTE: REMOVE STRAPS C81 - C82 C82 - C142 C37 - C34 C133 - C134
U0 U2
LCXD SIGNAL GENERATING CIRCUIT
NOTE 20
W1 C129 C130
STOP W7 C101
1 W6 C99
2 W5 C97
3 W4 C95
4 W3 C93
5 W2 C91
DIST. CONTACTS
C102 W21
C100 W16 1
C98 W17 2
C96 W18 3
C94 W19 4
C92 W20 5
PIV. TRANS. CONTACTS
C112 Y21
C117 Y16 1
C116 Y17 2
C115 Y18 3
C114 Y19 4
C113 Y20 5
HARDGATE TRANS. CONTACTS
NOTE: REMOVE STRAPS C99-C100 C97-C98 C95-C96 C93-C94 C91-C92
LBXD
LBXD LINE SHUNT CIRCUIT
NOTE 20
C37 C34 U14 Z29 Z28 U17 F4 F7 R14 R17
NOTE 17
LINE SHUNT RELAY
2250Ω
E8
C150
E3
LBXD TRANS. DIST. CIRCUIT
NOTE 20
KT K T AUX. SWITCH AH1 AH7 AH2
REC. SEND
NOTE 22
MANUAL & TIGHT TAPE SWITCH (IN TRANS. DIST.)
TRANS. MAG. RESISTOR (ON TRANS. DIST. BASE)
TRANS. CLUTCH MAGNET (IN TRANS. DIST.)
Z12 Z26 Z27 AC7
900Ω 400Ω V3 V2 V1 U3
C131 C132 F15 F10 C133 C134 U8 AC2 A2 AC3 U6 A3 C135 C136 U5 A7
200Ω
DIST. CLUTCH MAGNET (IN TRANS. DIST.)
200Ω
DIST. MAGNET RESISTOR (ON TRANS. DIST. BASE)
900Ω 100Ω V6 V5 V4
TAPE OUT SWITCH (IN TRANS. DIST.)
AC6 A6 NOTE 19 C137 Z14 Z23 C138
C83 C84 Z10 A14 AC14 AC13 A13 Z11 C85 AC12 A12 U12 C141 C140 U11 U9 C139
C81 Z22 D3 AB8 AB9 D9 NOTE 19 Z15 C86 AC11 A11 U13 C142
TRANS. AUX. B CONTACT (IN TRANS. DIST.)
Z32 C103
C82
RECTIFIER 115 V.D.C. OUTPUT 300 MA
L8 L7 L4 L3 L5 L9 L10 L2 L1
FUSE 0.8A
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
A1 Z31 A10 Z30
SPARE LEADS (TIED TO MAIN CABLE)
LBXD SIGNAL GENERATING CIRCUIT
NOTE 20
U0 U2
AE1 G1 Z1
STOP AE8 G8 Z7 C101 C102 Z21 D7 AB7
AE9 G9 Z6 C99 C100 Z16 D6 AB6 1
C97 C98 Z17 D5 AB5 2

3298 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
12	2-11-64	79910

NOTES

1 FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:

WD NUMBER	UNITS DIRECTLY OPERABLE WITH LESU
3264 WD	CABINETS – LAAC 209,210
3292 WD	ELECTRICAL SERVICE UNIT LESU 15
3302 WD	KEYBOARDS – LAK 4
2900 WD	MOTOR UNITS – LMU 12 OR 14
2864 WD	PAGE TYPING UNITS – LP
3300 WD	TRANSMITTER DISTRIBUTOR – LXD 3
3288 WD	TRANSMITTER DISTRIBUTOR – LAXD3 & LCXD1
3251 WD	TRANSMITTER DISTRIBUTOR – LBXD 5
3452 WD	TRANSMITTER DISTRIBUTOR BASE – LCXB 7

2 LEGEND

- ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU)
- ○ B LINE TEST KEY TERMINAL BLOCK (IN LESU)
- ○ C CABINET TERMINAL BLOCK
- ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU)
- ○ E POWER TERMINAL BLOCK (IN LESU)
- ◀ F KEYBOARD CONNECTOR
- ○ J ① TERMINAL STRIP (ON LINE RELAY ASSEM. IN LESU)
- ◀ J ② LINE RELAY CONNECTOR (IN LESU)
- ● J ③ LINE RELAY FILTER (IN LESU)
- ○ K TERMINAL STRIP (ON LINE TEST KEY IN LESU)
- ◀ R TYPING UNIT CONNECTOR
- ○ S SLOW RELEASE RELAY TERMINAL BOARD (IN LESU)
- ○ T TEST SWITCH TERMINAL BOARD (IN LESU)
- ◀ U TRANSMITTER DISTRIBUTOR CONNECTOR
- ○ AG MOTOR TERMINAL BLOCK (ON LAK)
- ○ AH AUXILIARY SWITCH TERMINAL BLOCK (ON LAK)

3 DOT DASH (– - –) LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.

4 ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.

5
a. RESISTANCE IN OHMS (Ω)
b. INDUCTANCE VALUES IN MICROHENRIES (MH)
c. CAPACITANCE VALUES IN MICROFARADS (MF)

6 CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. LINE CURRENT, ADD DASHED (– – –) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—) IN LINE TEST KEY, AND LINE RELAY CIRCUITS.

7 USE POWER & SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE.

FOR OTHER INSTALLATIONS, OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECTLY TO TERMINALS SHOWN.

8 USE SYNCHRONUS MOTOR ON REGULATED 60~ (± 1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~ UNREGULATED A.C.

9 RECTIFIER SHOWN CONTROLLED BY POWER SWITCH.

FOR CONTINUOUS OPERATION, MOVE RECTIFER LEAD L10 FROM E2 TO E1.

10
a. TO OPERATE MOTOR CONTROL, SET MUST BE EQUIPPED WITH EITHER
1. TIME DELAY MECH. OR
2. MOTOR STOP CONTACTS.

b. IF TAPE POSITION IS TO BE USED IN THE ASR SET THE TIME DELAY MECHANISM MUST BE EITHER ELECTRICALLY OR MECHANICALLY DISABLED.

11
A. LINE SHUNT RELAY SHOWN SHUNTING LINE RELAY COIL, TRANS. DIST. SIG. GENERATOR AND KEYBOARD SIG. GEN..

B. IF KEYBOARD SHUNT IS NOT DESIRED MOVE STRAP FROM C10 TO C9.

C. FOR DIRECT CONTROL OF LINE SHUNT RELAY FROM POWER SWITCH, ADD DASHED (------) CONNECTIONS AND OMIT CONN MARKED (—✕—) AT CABINET TERMINALS C34, C35, C37 CUST. MAY THEN SELECT PORTION OF SIG. LINE CKT. TO BE SHUNT. BY CONNECTING TERM. C13 TO EITHER C9, C10, C11, C15.

12 CIRCUIT SHOWS BOTH HORIZONTAL TABULATOR AND FORM START CONTROL USED ON TYPING UNIT. WHEN ONLY ONE CONTROL IS USED, OMIT CONNECTION MARKED (—✕—) AND ADD PROPER DASHED (– – –) CONNECTION IN TYPING UNIT CIRCUITS.

13 FORM PAPER OUT ALARM CONTACTS MAY BE MOUNTED ON EITHER THE TYPING UNIT OR EXTERNAL TO THE CABINET. IN LATTER EVENT, CONNECTIONS ARE MADE DIRECTLY TO TERMINALS C25 AND C26.

14 WHEN PAPER FEED SWITCH IS NOT USED, ADD DASHED (– – –) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—) IN MOTOR POWER CIRCUITS.

15 WHEN SIGNAL LINE BREAK SWITCH IS NOT USED IN KEYBOARD ADD DASHED (– – –) CONNECTION AT CABINET TERMINAL BLOCK BETWEEN C10 AND C11.

16 TO PREVENT SLOW RELEASE RELAY FROM ENERGIZING REMOVE CONNECTIONS MARKED (—✕—).

17
IN ALL KEYBOARDS F4 MUST BE CONNECTED TO F7
IN ALL TRANS. DIST. U14 MUST BE CONNECTED TO J17
IN ALL TYPING UNITS R14 MUST BE CONNECTED TO R17

18 SPARE LEADS FROM U18 AND F18 ARE RESERVED FOR POLAR OPERATION OF SIGNAL GENERATOR.

19 CIRCUIT SHOWN FOR 115 V.D.C. POWER INPUT TO TRANS. DIST. CLUTCH MAGNETS. FOR 48 V.D.C POWER INPUT MOVE WIRE CONNECTIONS AS FOLLOWS:

UNIT	WIRE INVOLVED	MOVE CONNECTION FROM	TO
LAXD & LCXD	C81 TO V6 C142 TO V3	V6 V3	V5 V2
LBXD	A13 TO V6 A6 TO V3	V6 V3	V5 V2

POWER SUPPLY MUST DELIVER 300 MA @ 48 V.D.C. OR 200 MA @ 115 V.D.C.

20 USE APPROPRIATELY LABELED LXD, LAXD, LBXD OR LCXD CIRCUITRY AND MAKE CONNECTIONS AS SHOWN.

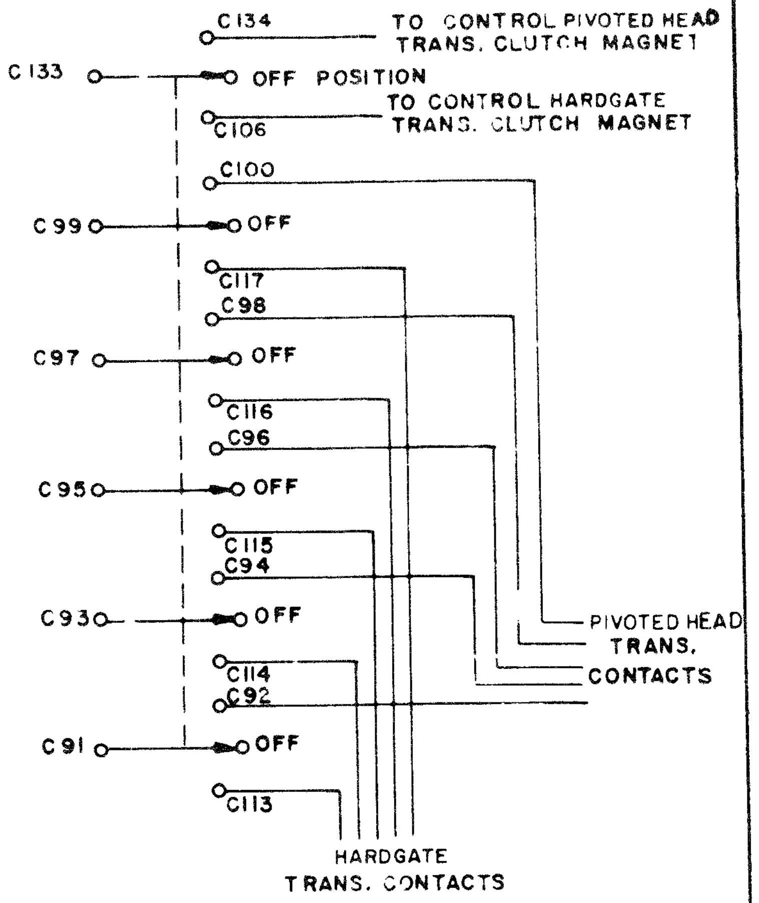
21 CUSTOMER MUST SUPPLY EXTERNAL SWITCHING AS FOLLOWS:

LXD —— NONE
LAXD —— BETWEEN C133 AND C134
TO CONTROL TRANS. CLUTCH MAGNET.
LBXD —— NONE

(CONTINUED)

(21 CONT.)

LCXD —— AS PER DIAGRAM BELOW:



22 WHEN A SEPARATE TIGHT TAPE SWITCH IS USED IN LBXD THIS SWITCH BECOMES A MANUAL ON—OFF SWITCH ONLY.

23 WHEN LXD IS USED, REMOVE THE STRAP BETWEEN TERMINALS C135—C136, ADD TWO 176162 STRAPS, ONE BETWEEN TERMINALS C23-C135 AND ONE BETWEEN C24-C136.

24 TO CONTROL PIVOTED READER FROM ITS TAPE OUT CONTACTS, REMOVE THE STRAP FROM TERMINALS 137 TO 141 AND PROVIDE SUITABLE CIRCUITRY. THE TAPE OUT CONTACTS MAY NOT BE USED DIRECTLY SINCE THEY OPEN MOMENTARILY.

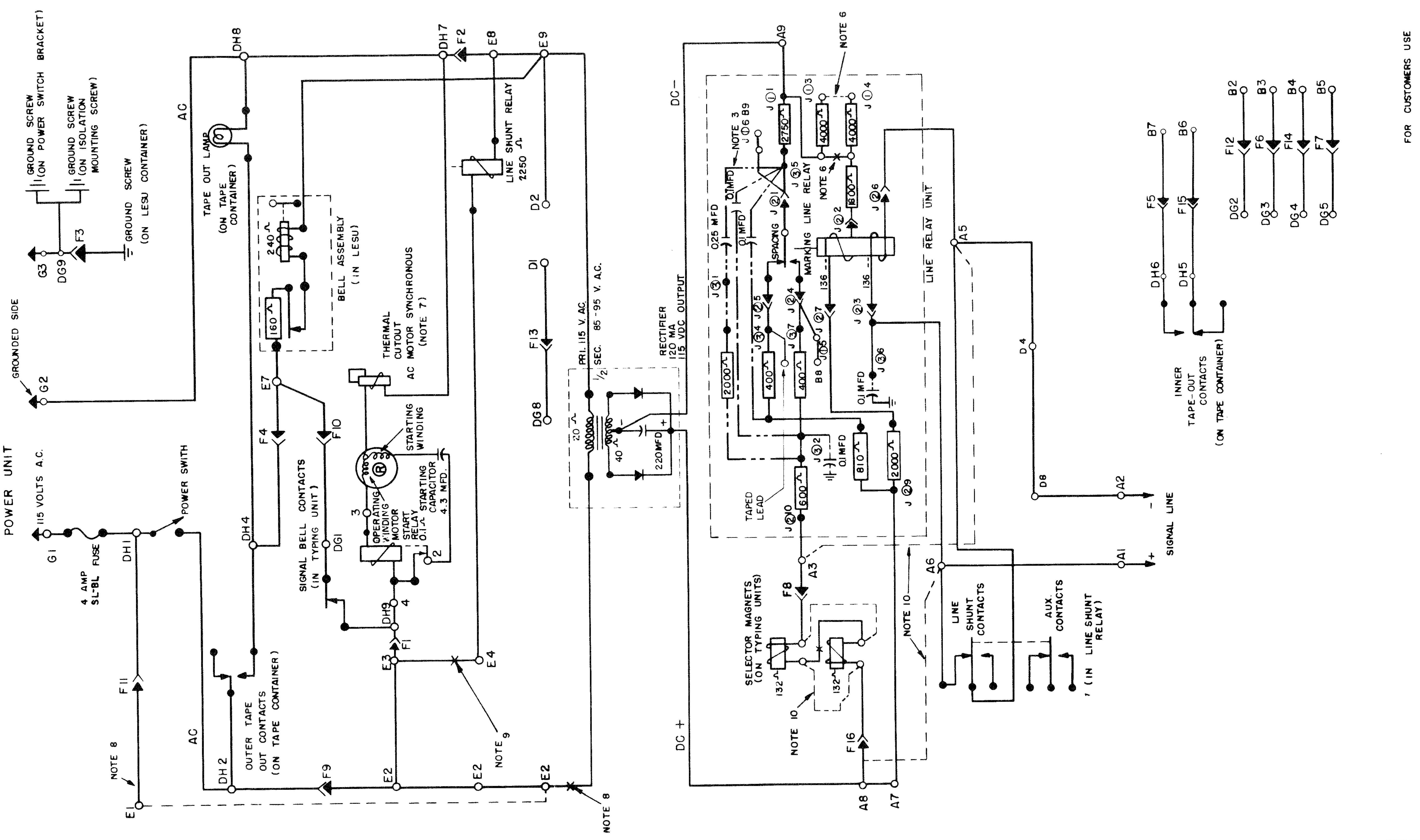
SHEET 3 OF 3

SCHEMATIC
WIRING DIAGRAM
MODEL 28
ASR-GP-OPT II AC
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 15
AND ASSOCIATED
UNITS

TELETYPE
CORPORATION

3298 WD

NO.	NOTES
1	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE WD NUMBER — UNITS DIRECTLY OPERABLE WITH LESU12 3344 WD — ELECTRICAL SERVICE UNIT LESU 12 2900 WD — MOTOR UNITS - LMU 3,4,6. 3319 WD — TYPING REPERFORATOR BASE LRB 3,11
2.	LEGEND O G 3-POINT CONNECTOR (ON BASE) O DG TERMINAL BLOCK (ON BASE) O DH TERMINAL BLOCK (ON BASE) ≪ F 16-POINT CONNECTOR O A TERMINAL BLOCK (IN LESU) O B TERMINAL BLOCK (IN LESU) O D TERMINAL BLOCK (IN LESU) O E TERMINAL BLOCK (IN LESU) O J ① TERMINAL STRIP ON LINE RELAY (IN LESU) ≪ J ② LINE RELAY CONNECTOR (IN LESU) O J ③ LINE RELAY FILTER (IN LESU)
3.	DOT-DASH (-·-·-) LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.
4.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS
5.	(A) RESISTANCE VALUES IN OHMS - (⌒) (B) INDUCTANCE VALUES IN MICROHENRIES (MH) (C) CAPACITANCE VALUES IN MICROFARADS (MFD)
6.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD DASH LINE (----) CONNECTION AND OMIT CONNECTION MARKED (—✕—) IN LINE RELAY.
7.	USE SYNCHRONOUS MOTOR ON REGULATED 60 ∿ (±1%) A.C. POWER ONLY GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60 ∿ UNREGULATED A.C.
8.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH A. FOR CONTINOUS OPERATION MOVE PRIMARY (INPUT) LEAD FROM TERMINAL E2 TO TERMINAL E1.
9.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER. SWITCH AND SHUNTING LINE RELAY COIL.
10.	FOR SPECIAL APPLICATIONS WHEN LESU 12 IS USED WITH LRB 20, THE FOLLOWING NOTE APPLIES; SELECTOR MAGNETS CAN BE OPERATED DIRECTLY IN A NEUTRAL SIGNAL LINE AS FOLLOWS REMOVE LINE RELAY FOR 20 MILLIAMPERE, 60 AND 75 WPM OPERATION (OR ANY INTERMEDIATE SPEED) 1. STRAP A5 TO A3 2. MOVE BLUE LEAD FROM TERMINAL A8 TO A6. FOR 60 MILLIAMPERE, 60,75 & 100 WPM OPERATION (OR ANY INTERMEDIATE SPEED) 1 AND 2 SAME AS ABOVE 3. ADD DASHED (---) LEAD, OMIT ✕ LEAD ON SELECTOR MAGNETS (REFER TO 3342 WD)



FOR CUSTOMERS USE

3343 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
H	4-21-60	28-130891
J	11-2-60	28-13473[illegible]
K	3-24-61	68761-19
L	12-7-61	71860
M	3-28-62	697[illegible]-10
P	11-26-63	78875

SCHEMATIC
WIRING DIAGRAM
MODEL 28

REPERFORATOR BASE
LRB 3,11
ELECT SERVICE
UNIT
LESU 12

APPROVALS	
D AND R	E OF M

E-NUMBER 104027
PROD. NO 3343 WD
DATE 6-27-57
P.D. FILE NO. 1-49.65AA
DRAWN E.R. CHKD G.G.
ENGD H.S.P. APPD

TELETYPE
CORPORATION

3343 WD

2FX10

NOTES

1. LEGEND:

A-6-W-BL
- DISTANT TERMINATING AREA
- DISTANT TERMINAL DESIGNATION
- WIRE COLOR CODE

2. COLOR CODE

BK - BLACK	W-BK - WHITE - BLACK
BR - BROWN	W-BR - WHITE - BROWN
R - RED	W-R - WHITE - RED
O - ORANGE	W-O - WHITE - ORANGE
Y - YELLOW	W-Y - WHITE - YELLOW
G - GREEN	W-G - WHITE - GREEN
BL - BLUE	W-BL - WHITE - BLUE
P - PURPLE	
W - WHITE	W-S - WHITE - SLATE
S - SLATE	

3. UNIT WIRED FOR 115 VOLTS 50 TO 60 CYCLE A.C. POWER INPUT ONLY.

4. CONNECTOR VIEWED FROM SOLDER TERMINAL END.

5. CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP OPERATION REMOVE AND ADD CONNECTIONS AS TABULATED BELOW.

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020 AMP.	J①1-J①2,	J①3-J①4

6. RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. FOR CONTINUOUS OPERATION REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-1.

7. LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING LINE RELAY COIL.

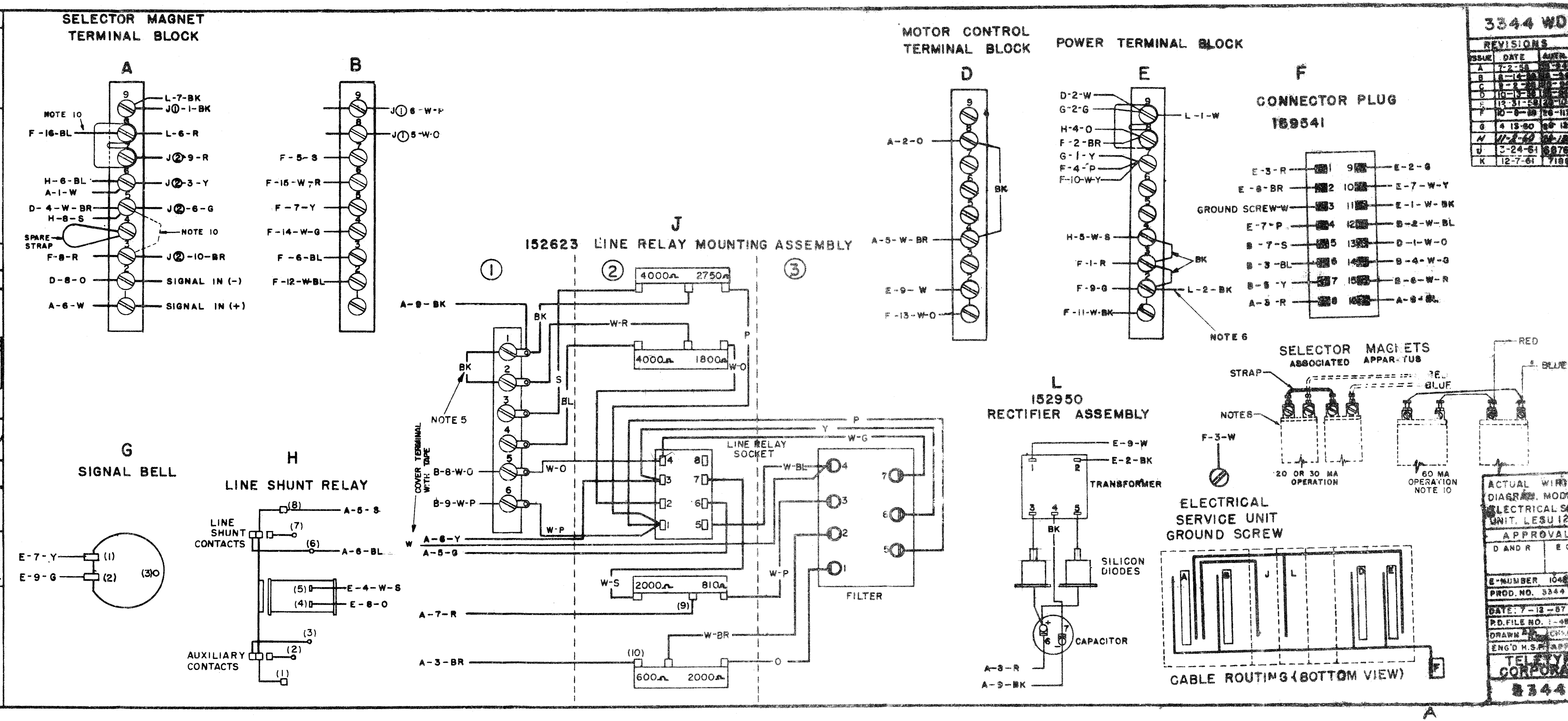
8. SELECTOR MAGNETS ARE TO BE WIRED AS SHOWN FOR 30 MILLIAMPERE OPERATION WHEN THE LINE RELAY IS USED

9. ASSOC. CABLE NUMBERS

159939	CABLE ASSEM., LESU 12
153477	CABLE ASSEM., RECTIFIER
164030	CABLE ASSEM., LINE RELAY MTG. ASSEM.

10. SELECTOR MAGNETS CAN BE CONNECTED DIRECTLY IN THE SIGNAL LINE CIRCUIT FOR NEUTRAL OPERATION AS FOLLOWS;

REMOVE LINE RELAY
20 MILLIAMPERE, 60 & 75 WPM OPERATION
(OR ANY INTERMEDIATE SPEED)
A. STRAP A5 TO A3.
B. MOVE BLUE LEAD FROM TERMINAL A8 TO TERMINAL A6
60 MILLIAMPERE, 60, 75 & 100 WPM OPERATION
(OR ANY INTERMEDIATE SPEED)
A & B SAME AS ABOVE.
C CHANGE WIRING ON SELECTOR MAGNETS FOR 60 MILLIAMPERE OPERATION.



3344 WD

REVISIONS

ISSUE	DATE	AUTH.
A	7-2-58	[illegible]
B	[illegible]	[illegible]
C	[illegible]	[illegible]
D	10-13-[illegible]	[illegible]
E	12-31-58	[illegible]
F	10-[illegible]	26-11798
G	4 13 60	[illegible]
H	11-2-60	[illegible]
J	3-24-61	68761-1.0
K	12-7-61	71890

ACTUAL WIRING DIAGRAM, MODEL 28
ELECTRICAL SERVICE UNIT, LESU 12

APPROVALS

D AND R	E OF M

E-NUMBER 104[illegible]
PROD. NO. 3344 WD
DATE: 7-12-57
P.D. FILE NO. 1-49.65AA
DRAWN CH'K'D
ENG'D H.S.F. APP'D

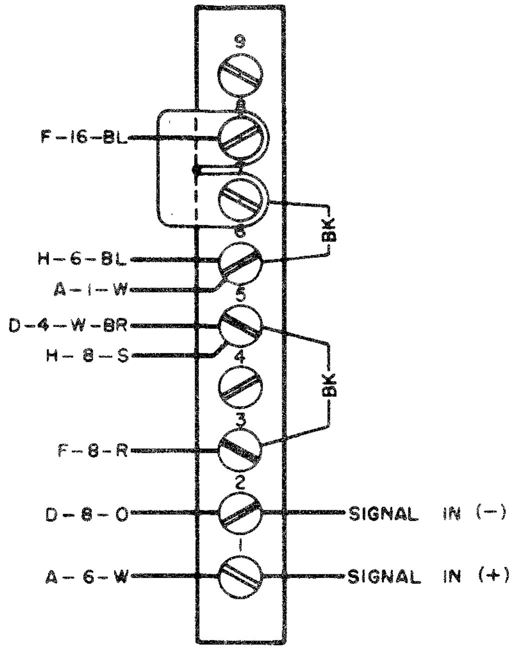
TELETYPE CORPORATION

3344 WD

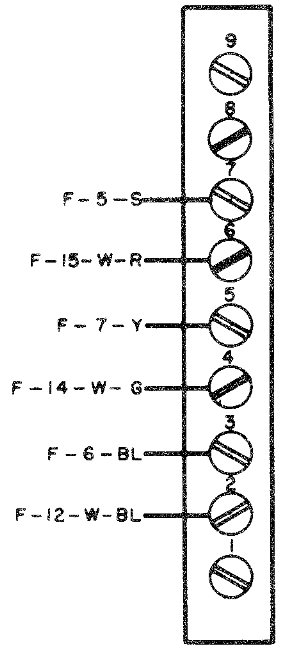
NO	NOTES
1.	WIRING LEGEND: A – 1 – W – BL DISTANT TERMINATING AREA DISTANT TERMINAL DESIGNATION WIRE COLOR CODE
2.	COLOR CODE: BR – BROWN R – RED O – ORANGE Y – YELLOW G – GREEN BL – BLUE S – SLATE P – PURPLE W – WHITE W-BK WHITE-BLACK W-BR WHITE-BROWN W-R WHITE-RED W-O WHITE-ORANGE W-Y WHITE-YELLOW W-G WHITE-GREEN W-BL WHITE-BLUE W-S WHITE-SLATE
3.	UNIT WIRED FOR 115 VOLTS. 50 TO 60 CYCLE A. C. POWER INPUT ONLY.
4.	CONNECTOR VIEWED FROM SOLDER TERMINAL END.
5.	CIRCUITS SHOWN FOR EXTERNAL SIGNAL LINE OPERATION.
6.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING LINE RELAY COIL.

SELECTOR MAGNET TERMINAL BLOCK

A

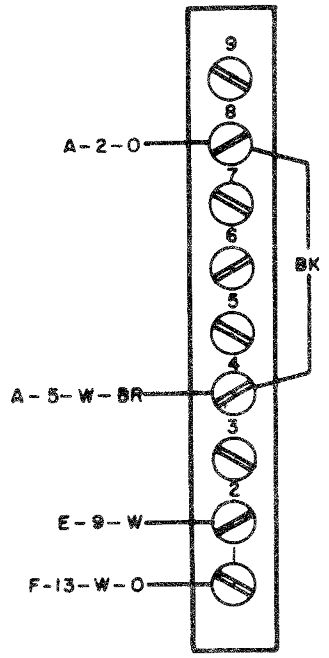


B



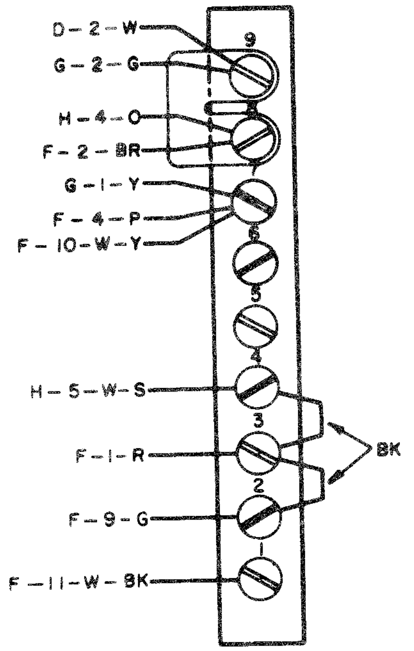
MOTOR CONTROL TERMINAL BLOCK

D

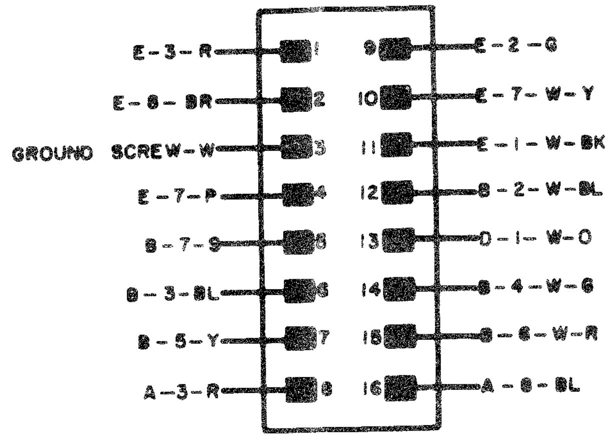


POWER TERMINAL BLOCK

E

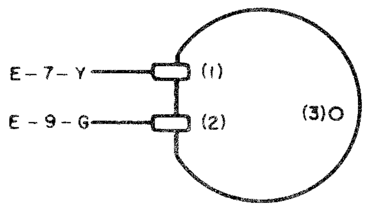


F-CONNECTOR, PLUG 159541



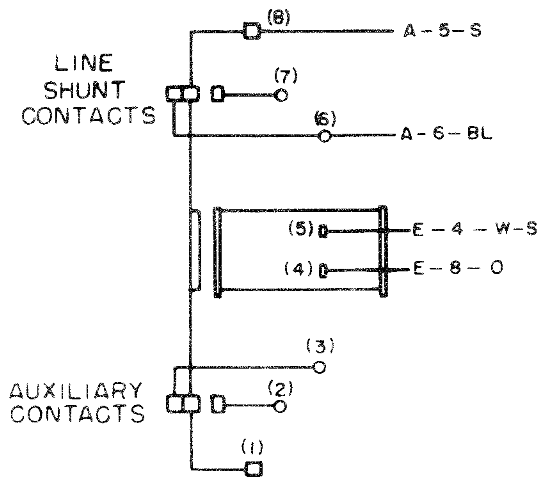
G

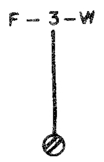
SIGNAL BELL



H

LINE SHUNT RELAY

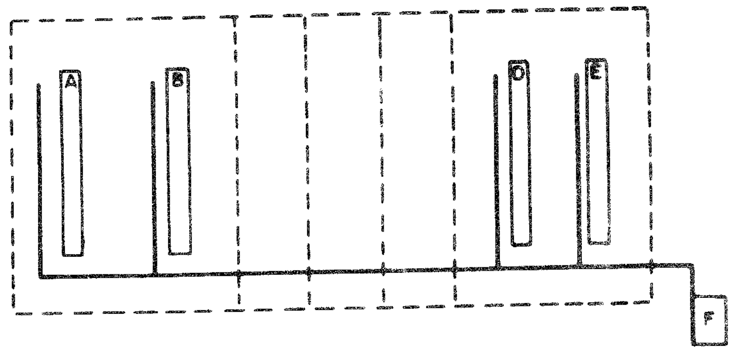




ELECTRICAL SERVICE UNIT GROUND SCREW

CABLE ROUTING

(BOTTOM VIEW)



3624 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	6-15-59	28-11292

APPROVALS

D AND D	E OF M

E-NUMBER

PROD. NO. 3624 WD

ACTUAL WIRING DIAGRAM, MODEL 28 ELECTRICAL SERVICE UNIT, LESU 27

DATE: 11-3-58

P.D. FILE NO. G-159 65 AA

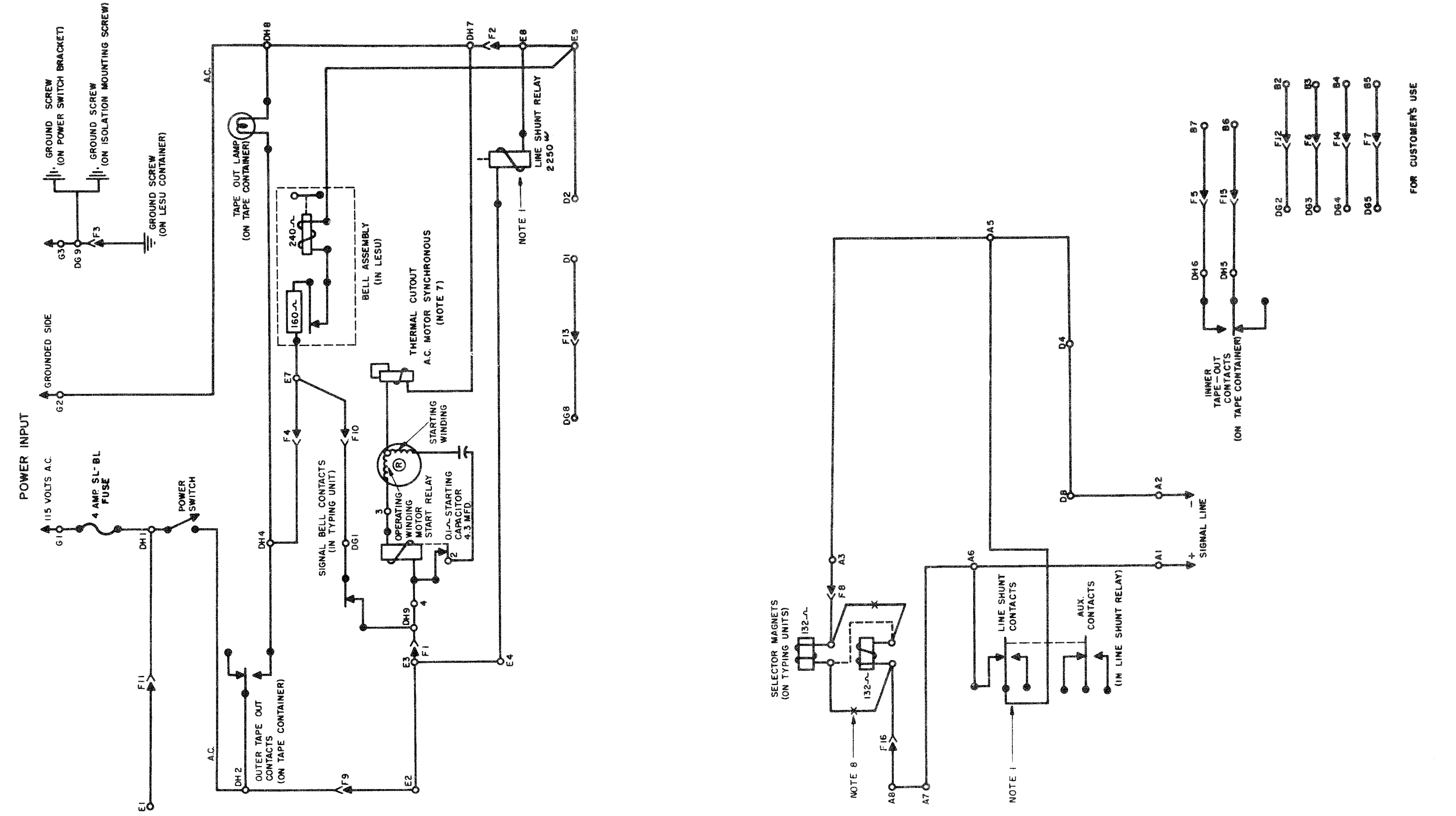
DRAWN J.W.R.	CHKD.
ENGD. J.R.H.	APPD.

TELETYPE
CORPORATION

3624 WD

NO.	NOTES
1.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING LINE RELAY COIL.
2.	LEGEND: ○ G 3-POINT CONNECTOR (ON BASE) ○ DG TERMINAL BLOCK (ON BASE) ○ DH TERMINAL BLOCK (ON BASE) ◁◀ F 16-POINT CONNECTOR ◉ A TERMINAL BLOCK (IN LESU) ○ B TERMINAL BLOCK (IN LESU) ○ D TERMINAL BLOCK (IN LESU) ○ E TERMINAL BLOCK (IN LESU)
3.	DOT-DASH (-·-·-·-) LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.
4.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
5.	(a) RESISTANCE VALUES IN OHMS (Ω) (b) INDUCTANCE VALUES IN MICROHENRIES (MH) (c) CAPACITANCE VALUES IN MICROFARADS (MFD)
6.	CIRCUIT SHOWN FOR EXTERNAL SIGNAL LINE OPERATION.
7.	USE SYNCHRONOUS MOTOR ON REGULATED 60~ (±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~ UNREGULATED A.C.
8.	CIRCUITS SHOWN FOR 0.060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR 0.020 AMP. LINE CURRENT, ADD DASH LINE (------) CONNECTION AND OMIT CONNECTION MARKED (—×—)
9.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:

WD NUMBER	UNITS OPERABLE WITH LESU 27
3624 WD	ELECT. SERVICE UNIT - LESU 27.
2900 WD	MOTOR UNIT - LMU 3, 4, 6.
3319 WD	TYPING REPERF. BASE - LRB3, 11



3625 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
A	[illegible]	[illegible]
B	4-26-63	[illegible]

SCHEMATIC
WIRING DIAGRAM
MODEL 28
ELECTRICAL SERVICE
UNIT LESU 27

APPROVALS	
D AND R	E OF M
E-NUMBER	
PROD. NO. 3625 WD	
DATE: 12-16-58	
P.D. FILE NO. G-165,59AA	
DRAWN: K.F.L.	CHKD.
ENGD. J.R.H.	APPD.

TELETYPE
CORPORATION

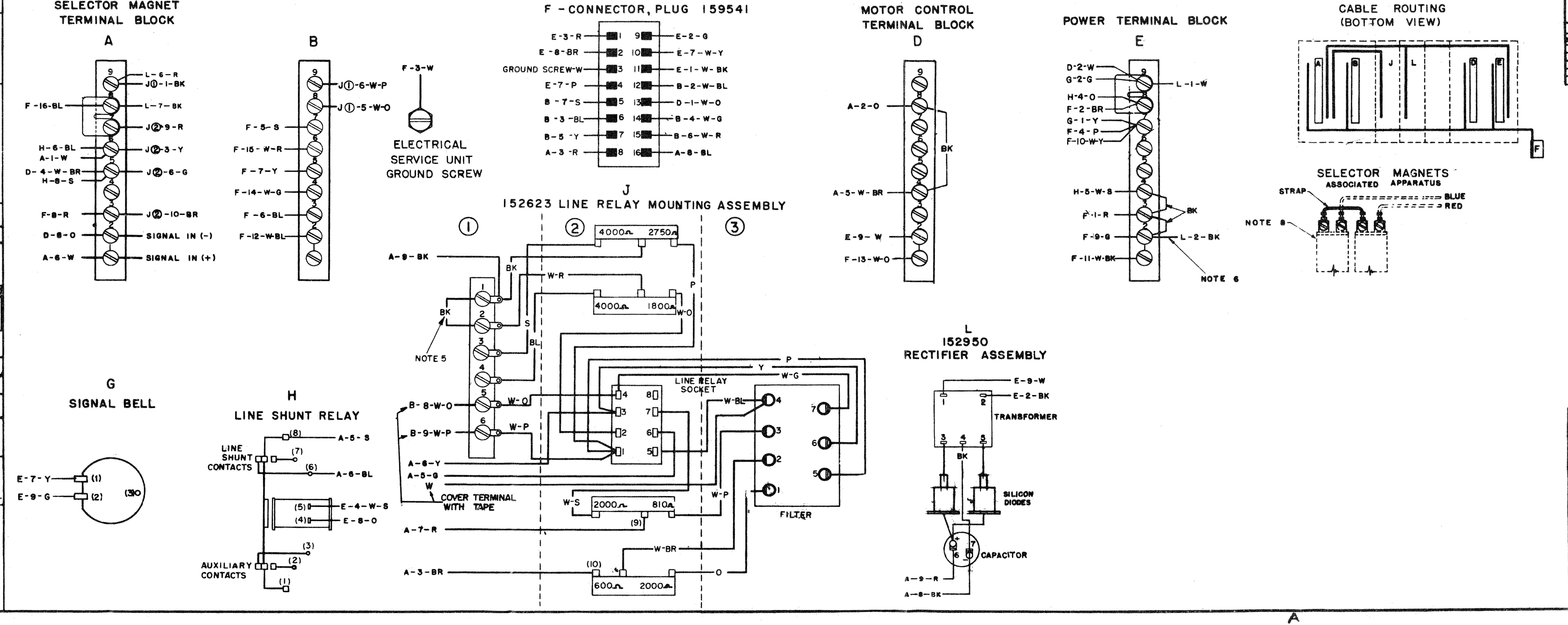
3625 WD

R 3½

3½ X10½

NO.	NOTES
1.	WIRING LEGEND: A-1-W-BL: A — DISTANT TERMINATING AREA; 1 — DISTANT TERMINAL DESIGNATION; W-BL — WIRE COLOR CODE
2.	COLOR CODE BK - BLACK BR - BROWN R - RED O - ORANGE Y - YELLOW G - GREEN BL - BLUE P - PURPLE W - WHITE S - SLATE W-BK - WHITE - BLACK W-BR - WHITE - BROWN W-R - WHITE - RED W-O - WHITE - ORANGE W-Y - WHITE - YELLOW W-G - WHITE - GREEN W-BL - WHITE - BLUE W-S - WHITE - SLATE
3.	UNIT WIRED FOR 115 VOLTS 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
4.	CONNECTOR VIEWED FROM SOLDER TERMINAL END.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP OPERATION REMOVE AND ADD CONNECTIONS AS TABULATED BELOW.
6.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. FOR CONTINUOUS OPERATION REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-1.
7.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING LINE RELAY COIL.
8	SELECTOR MAGNETS ARE TO BE WIRED AS SHOWN FOR 30 MILLIAMPERE OPERATION WHEN THE LINE RELAY IS USED.
9.	ASSOC. CABLE NUMBERS 159939 CABLE ASSEM., LESU 153477 CABLE ASSEM., RECTIFIER 153475 CABLE ASSEM., LINE RELAY MTG. ASSEM.

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020 AMP.	J①1 - J①2,	J①3 - J①4



3638 WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
A	3-27-61	68761-28
B	12-7-61	71860

ACTUAL WIRING DIAGRAM. MODEL 28 ELECTRICAL SERVICE UNIT. LESU 30

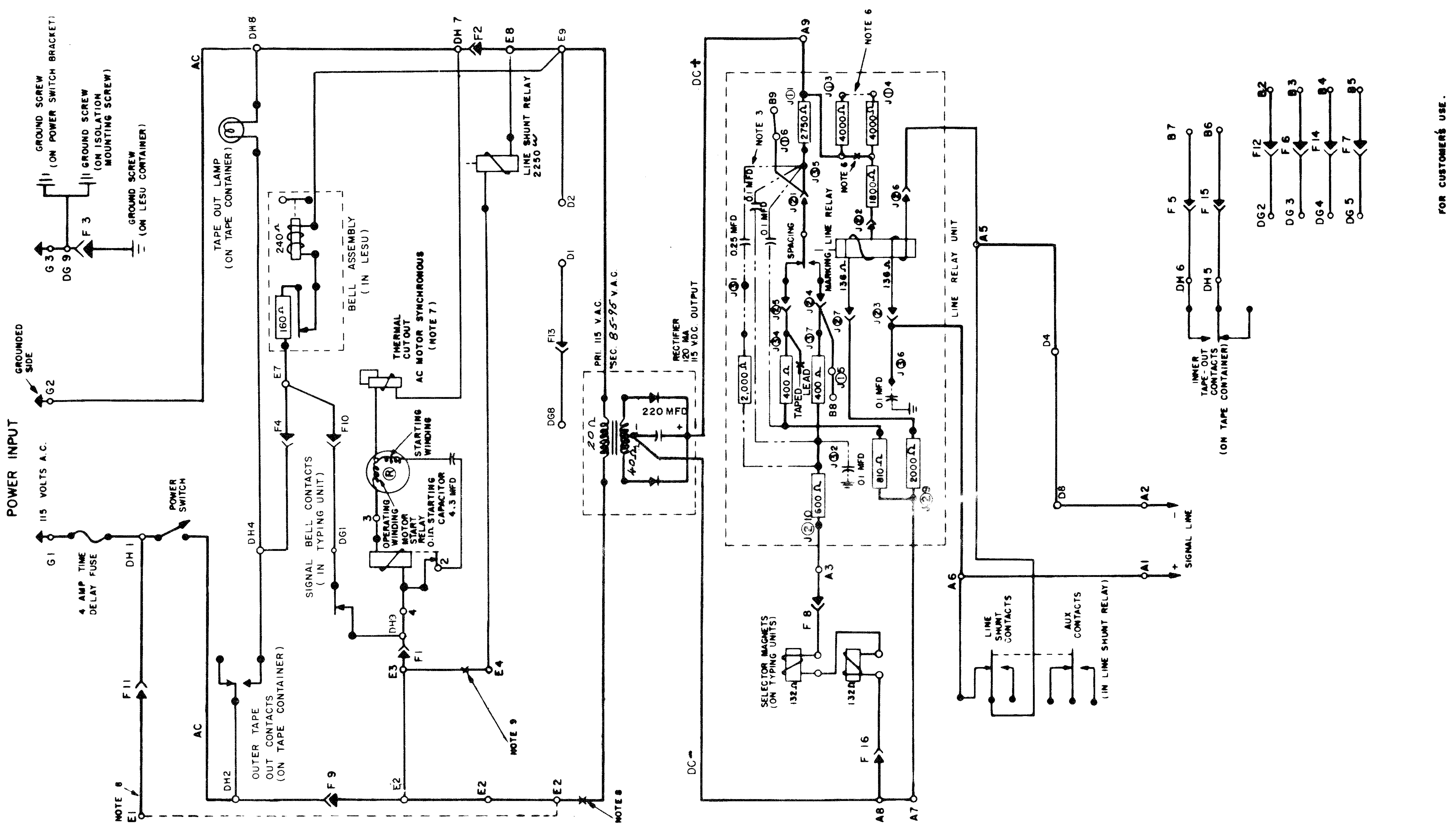
APPROVALS	
D AND R	E OF M

E-NUMBER
PROD. NO. 3638 WD
DATE: 12-19-58
P.D. FILE NO. 6-159.66AA
DRAWN K.F.L. CHKD.
ENG'D D.C.L. APPD.
TELETYPE CORPORATION
3638 WD

R 3½

24¼ X 10¾

NO.	NOTES
1.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE WD NUMBER | UNITS DIRECTLY OPERABLE WITH LESU30 3639 WD | ELECTRICAL SERVICE UNIT LESU 30 2900 WD | MOTOR UNITS – LMU 3,4,6, 3319 WD | TYPING REPERFORATOR BASE LRB3,11
2.	LEGEND ○ G 3-POINT CONNECTOR (ON BASE) ○ DG TERMINAL BLOCK (ON BASE) ○ DH TERMINAL BLOCK (ON BASE) ≪ F 16-POINT CONNECTOR ○ A TERMINAL BLOCK (IN LESU) ○ B TERMINAL BLOCK (IN LESU) ○ D TERMINAL BLOCK (IN LESU) ○ E TERMINAL BLOCK (IN LESU) ○ J ① TERMINAL STRIP ON LINE RELAY (IN LESU) ≪ J ② LINE RELAY CONNECTOR (IN LESU) ○ J ③ LINE RELAY FILTER (IN LESU)
3.	DOT-DASH (-- — -) LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.
4.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
5.	(a) RESISTANCE VALUES IN OHMS-(Ω) (b) INDUCTANCE VALUES IN MICROHENRIES (MH) (c) CAPACITANCE VALUES IN MICROFARADS (MFD)
6.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD DASH LINE (---) CONNECTION AND OMIT CONNECTION MARKED (—✕—) IN LINE RELAY.
7.	USE SYNCHRONOUS MOTOR ON REGULATED 60 ∼ (±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60 ∼ UNREGULATED A.C.
8.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. A. FOR CONTINUOUS OPERATION MOVE PRIMARY (INPUT) LEAD FROM TERMINAL E2 TO TERMINAL E1.
9.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING LINE RELAY COIL.



FOR CUSTOMERS USE.

3639 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
[illegible]	[illegible]	[illegible]
B	12-7-61	71660
C	[illegible]	[illegible]

SCHEMATIC
WIRING DIAGRAM
MODEL 28

REPERFORATOR BASE
LRB3,11

ELECT SERVICE
UNIT
LESU30

APPROVALS	
D AND	E OF M
E-NUMBER	
PROD NO. 3639 WD	
DATE: 12-23-59	
P.D. FILE NO. 6-159.65	
DRAWN A.D.	CHKD
ENGD. D.C.L.	APPD

TELETYPE
CORPORATION

3639 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
A	3-2-61	68161-28
B	12-7-61	7[illegible]
C	3-78-67	69768-16

3640 WD
12-19-58

ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 31

DRAWN: E.M.
ENGR: D.C.L.
APPROVED
CHECKED:
FILE G-159.65 AA

TELETYPE
CORPORATION

REVISIONS

ISSUE	DATE	AUTH. NO.
A	3-27-61	68761-28
B	12-7-61	[illegible]
C	3-28-62	69768-16

3640 WD
12-19-58

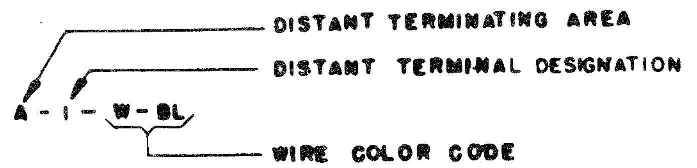
ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 31

DRAWN: E.M.	APPROVED:
ENGR: D.C.L.	
CHECKED:	
FILE G-159.65 AA	

TELETYPE
CORPORATION

NOTES

1. WIRING LEGEND:



2. COLOR CODE

BK - BLACK
BR - BROWN
R - RED
O - ORANGE
Y - YELLOW
G - GREEN
BL - BLUE
P - PURPLE
W - WHITE
S - SLATE

W - BK - WHITE - BLACK
W - BR - WHITE - BROWN
W - R - WHITE - RED
W - O - WHITE - ORANGE
W - Y - WHITE - YELLOW
W - G - WHITE - GREEN
W - BL - WHITE - BLUE
W - P - WHITE - PURPLE
W - S - WHITE - SLATE

3. UNIT WIRED FOR 115 VOLTS, 50 TO 60 CYCLE A.C. POWER INPUT ONLY.

4. PLUGS VIEWED FROM SOLDER TERMINAL ENDS

5. CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP OPERATION REMOVE AND ADD CONNECTIONS AS TABULATED BELOW

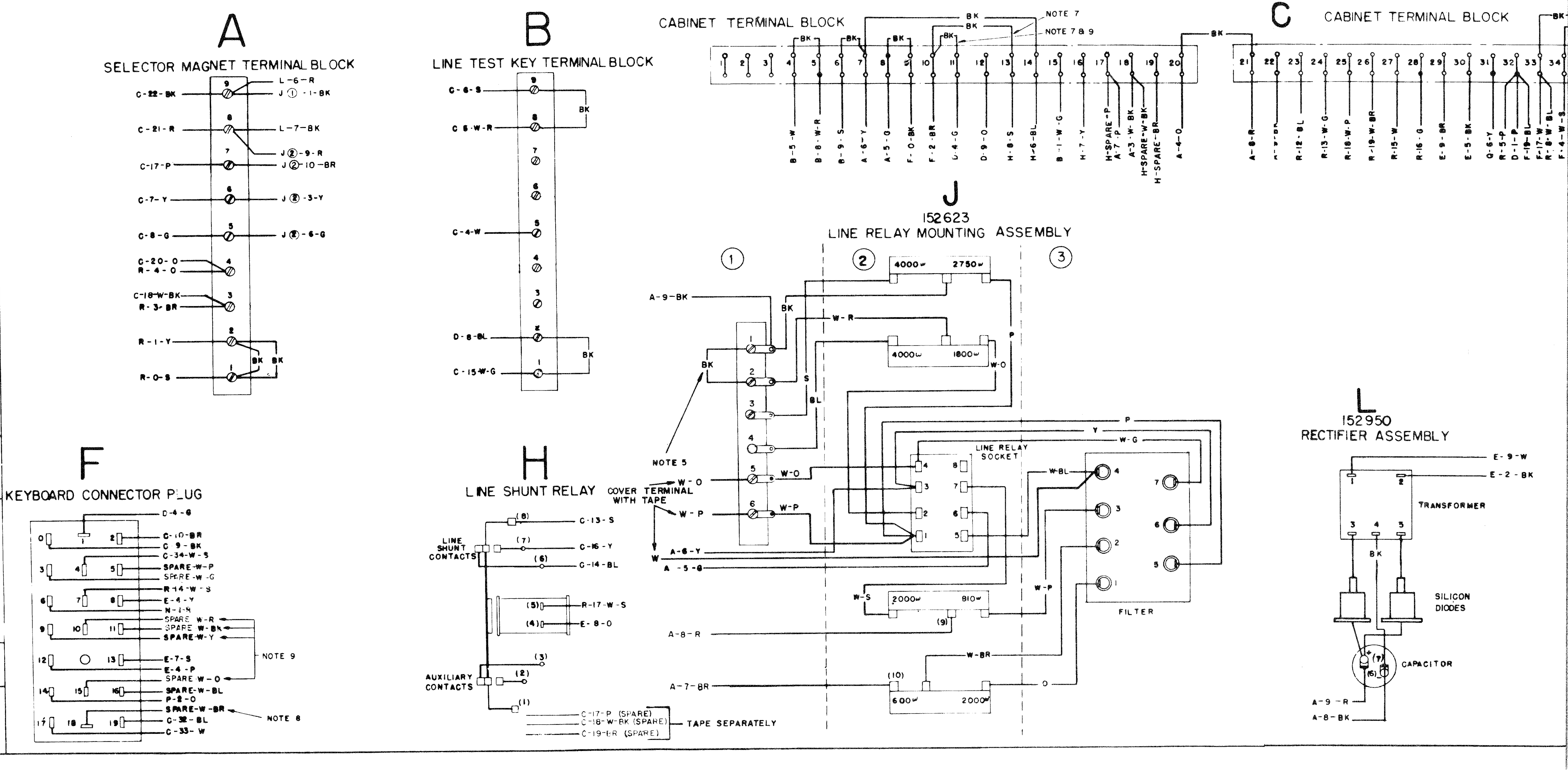
SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTIONS ADDED
.020 AMP	J①1 - J①2,	J①3 — J①4

6. RECTIFIER SHOWN CONTROLLED BY POWER SWITCH
FOR CONTINUOUS OPERATION, REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-1.

7. LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH.
   - a FOR KEYBOARD OPERATION
     TERMINAL 13 MAY BE CONNECTED TO EITHER TERMINAL C-9, C-10, C-11 OR C-15 TO OBTAIN DESIRED SHUNTING OF THE SIGNAL LINE CIRCUIT
   - b. FOR RECEIVING ONLY BASES
     CONNECT C-10 TO C-11

8. THE SPARE LEADS FROM THE KEYBOARD AND TYPING UNIT CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT RESPECTIVELY.

9. FOR LESU 31 SPLICE AND TAPE SPARE LEADS AS FOLLOWS: F-9-W-Y TO R-6-W-Y, F-10-WR TO R-9-W-R, F-11-W-BK TO R-11-W-BK, AND F-15-W-O TO R-10-W-O
CONNECT C-10 TO C-11



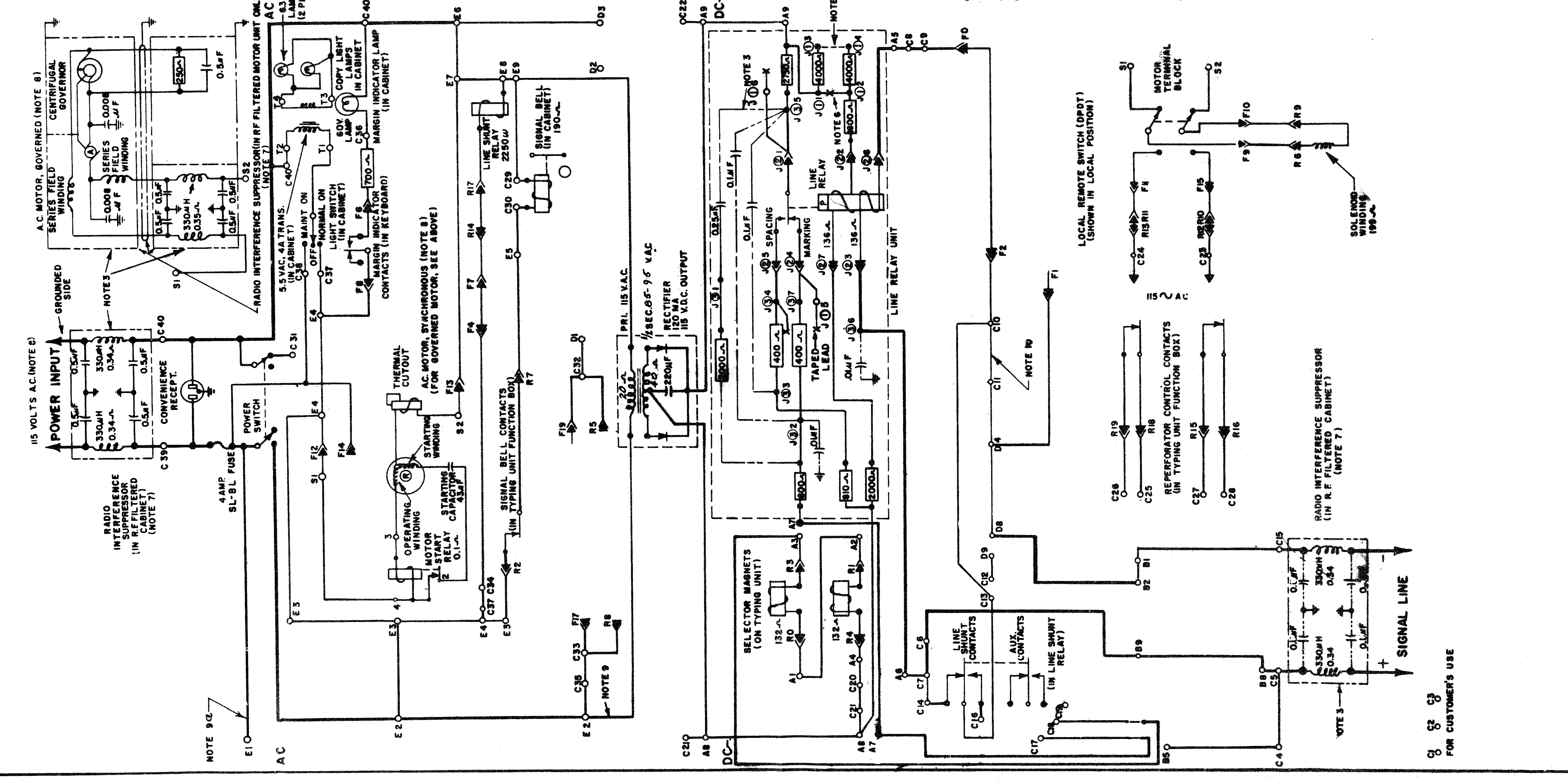
3 3

R 8½

33 X 10 ¾

NO	NOTES	NO	NOTES
1	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS, SEE: WD NUMBER — UNITS DIRECTLY OPERABLE WITH LESU 31 2883 WD — BASE, RECEIVING ONLY—L B 4 3236 WD — CABINETS—LAC 203, 204, 205 3640 WD — ELECTRICAL SERVICE UNIT—LESU 31 2882 WD — KEYBOARDS—LK 4,5 2900 WD — MOTOR UNITS—L MU 3,4,6 2864 WD — PAGE TYPING UNITS—LP 4,5,7 2880 WD — PAGE TYPING UNITS—LP 6,8		
2	LEGEND ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU). ○ B LINE TEST KEY TERMINAL BLOCK (IN LESU) ○ C CABINET TERMINAL BLOCK. ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU) ○ E POWER TERMINAL BLOCK (IN LESU) ≪ F KEYBOARD CONNECTOR. ○ J① TERMINAL STRIP (ON LINE RELAY ASSEM. IN LESU) ≪ J② LINE RELAY CONNECTOR (IN LESU) ● J③ LINE RELAY FILTER (IN LESU) ≪ R TYPING UNIT CONNECTOR. ○ S MOTOR TERMINAL BLOCK (IN LK)		
3	DOT DASH- - ——LINES INDICATE FILTERING. SHIELDING AND SUPPRESSION NETWORKS.		
4	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.		
5	a. RESISTANCE VALUES IN OHMS (Ω) b. INDUCTANCE VALUES IN MICROHENRIES (μH) c. CAPACITANCE VALUES IN MICROFARADS (μF)		
6	CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD DASHED (- - - -) CONNECTION AND OMIT CONNECTION MARKED (——X——) IN LINE RELAY CIRCUIT.		
7	a. USE POWER AND SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV.-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE. b. FOR OTHER INSTALLATIONS, OMIT SUPPRSSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECT TO TERMINALS SHOWN.		
8	USE SYNCHRONOUS MOTOR ON REGULATED 60~(±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~ UNREGULATED A.C.		
9	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. FOR CONTINUOS OPERATION, MOVE PRIMARY (INPUT) LEAD FROM E 2 TO E 1		
10	WHEN RECEIVING ONLY BASE IS USED CONNECT C-10 TO C-11		
11	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING SIGNAL LINE.		

FOR ACTUAL WIRING SEE 3640 WD



3641 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	8-4-59	28-11506
B	1-20-61	28-14824
C	3-23-61	68761-21
D	12-7-61	71860
E	3-26-62	69768-40
F	11-28-63	78680

APPROVALS	
D AND	E OF M
	4

E-Nowack

Prod. No.

SCHEMATIC
WIRING DIAGRAM
ELECTRICAL
SERVICE UNIT
LESU 31
ASSOCIATED MODEL 28
APPARATUS

INCLUDES:
LOCAL REMOTE SWITCH
LINE RELAY
RECTIFIER (LOCAL CIRCUIT SUPPLY)

DATE: 12-19-58

RD FILE NO. 6-159.55AA

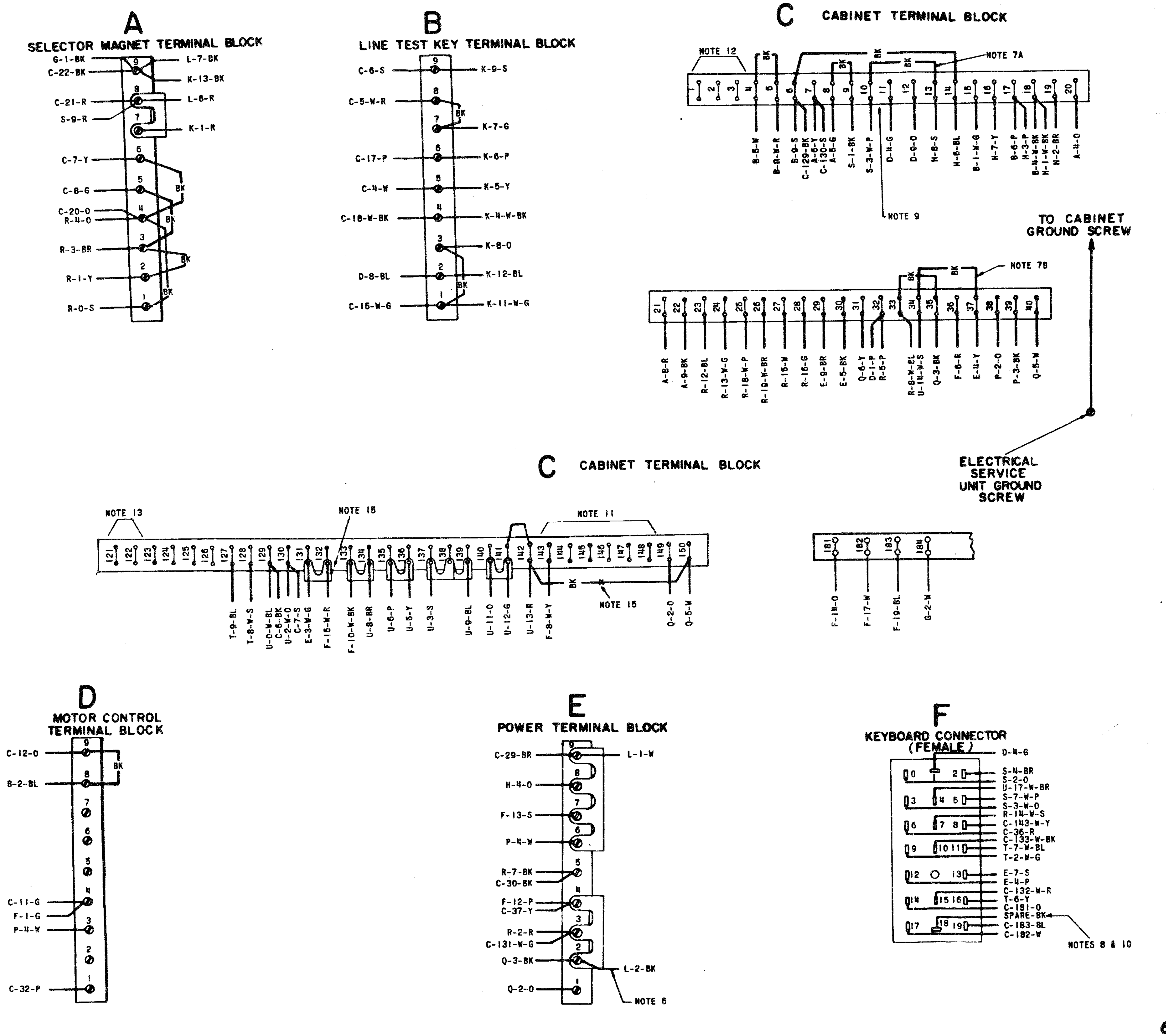
DRAWN. K.F.L. CHKD.

ENGD. D.C.L. APPD.

TELETYPE CORPORATION

3641 WD

NO.	NOTES
1.	WIRING LEGEND: A-1-W-BL —DISTANT TERMINATING AREA —DISTANT TERMINATING DESIGNATION —WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK G - GREEN BR - BROWN BL - BLUE R - RED P - PURPLE O - ORANGE W - WHITE Y - YELLOW S - SLATE
3.	UNIT WIRED FOR 115 VOLTS, 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
4.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION, REMOVE AND ADD CONNECTIONS AS TABULATED BELOW: SIGNAL LINE CURRENT — CONNECTIONS REMOVED — CONNECTIONS ADDED .020 AMP. — K1-K2, A1-A4, A2-A3 — A1-A2
6.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. A. FOR CONTINUOUS OPERATION, REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-1. B. FOR OPERATION FROM MOTOR CONTROL, REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-3.
7.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING SELECTOR MAGNETS AND KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATOR. A. IF KEYBOARD SHUNTING IS NOT DESIRED, OR WHEN SIGNAL LINE BREAK SWITCH IS PRESENT, REMOVE THE BLACK STRAP CONNECTED BETWEEN TERMINALS C-10 AND C-13 AND CONNECT TERMINALS C-9 AND C-13. B. FOR DIRECT CONTROL OF THE LINE SHUNT RELAY FROM THE POWER SWITCH, REMOVE STRAP BETWEEN TERMINALS C-34 AND C-37 AND CONNECT TERMINALS C-34 AND C-35. TERMINAL C-13 MAY THEN BE CONNECTED TO EITHER TERMINALS C-9, C-10, C-11, OR C-15 TO OBTAIN THE DESIRED SHUNTING OF THE SIGNAL LINE CIRCUIT.
8.	THE SPARE LEADS FROM THE KEYBOARD AND TRANSMITTER DISTRIBUTOR UNITS CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT END OF THE ELECTRICAL SERVICE UNIT. THE SPARE LEADS FROM THE TYPING UNIT PLUG ARE TERMINATED IN THE LEFT END OF THE ELECTRICAL SERVICE UNIT.
9.	ADD STRAP BETWEEN C-10 AND C-11, IF SIGNAL LINE BREAK SWITCH IS NOT USED.
10.	SPARE LEADS FROM F-18 AND U-18 ARE RESERVED FOR POLAR OPERATION OF KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATORS.
11.	TERMINALS C-143 - C-148 RESERVED FOR CABINET LAMP OPERATION.
12.	TERMINALS C1 - C3 RESERVED FOR CUSTOMER USE.
13.	TERMINALS C-121 - C-122 RESERVED FOR PERFORATOR LOW-TAPE SWITCH.
14.	CONTACTS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITION.
15.	WHEN LBXD IS USED IN PLACE OF LXD, MAKE THE FOLLOWING CHANGES: OMIT CONNECTIONS — ADD CONNECTIONS C-142 TO C-150 C-131 TO C-132



3642WD

REVISIONS

ISSUE	DATE	AUTH. NO.
~~A~~ 2	8-4-59	28-11508
~~B~~ 3	10-5-59	28-11798
~~C~~ 4	3-20-61	69286
5	3-27-61	68761-28
6	3-28-62	69768-10

SHEET 1 OF 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU32

APPROVALS

D AND R	E OF M
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E-NUMBER
PROD. NO. 3642WD
DATE 12-12-58
P.D. FILE NO. 6-159.65AA
DRAWN CHKD.
ENGD. D.C.L. APPD.

TELETYPE
CORPORATION

6 3642WD

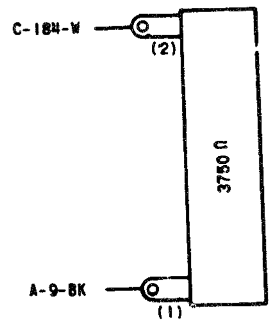
SEE SHEET 1 FOR NOTES.

3642WD

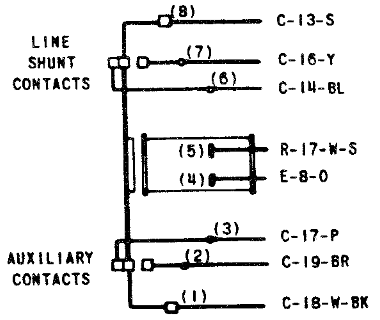
REVISIONS

ISSUE	DATE	AUTH. NO.
~~A~~ 2	8-4-59	28-11508
~~B~~ 3	10-5-59	28-11799
~~C~~ 4	3-20-61	69286
5	3-27-61	68761-28
6	3-28-62	69768-10

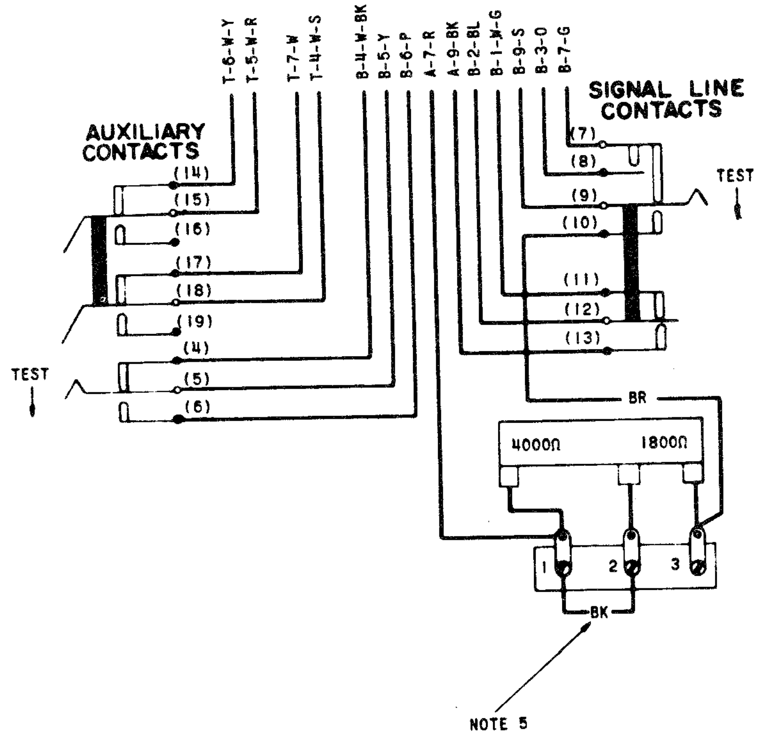
G



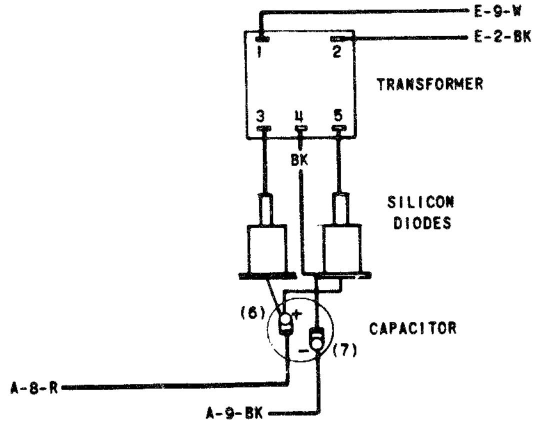
H
LINE SHUNT RELAY

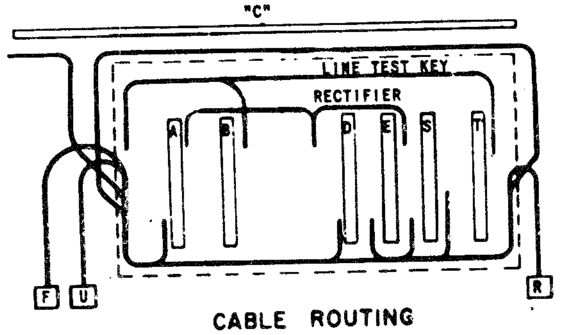


K
LINE TEST KEY ASSEMBLY



L
RECTIFIER ASSEMBLY

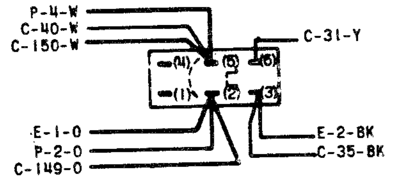




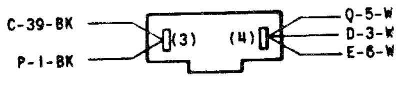
CABLE ROUTING

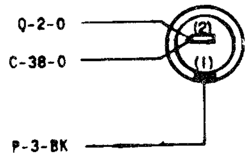
BOTTOM VIEW

Q
POWER SWITCH

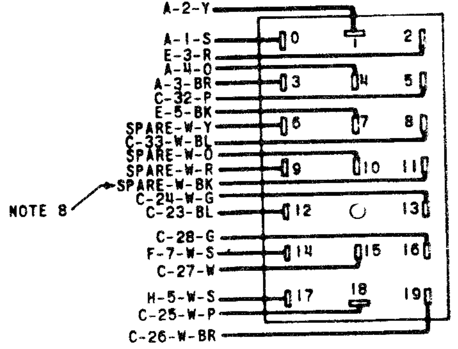


P
CONVENIENCE RECEPTACLE

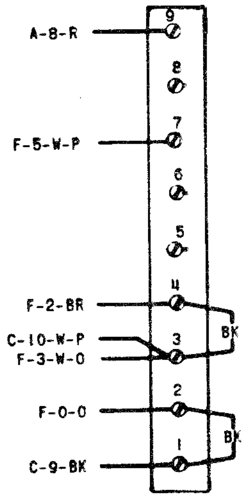




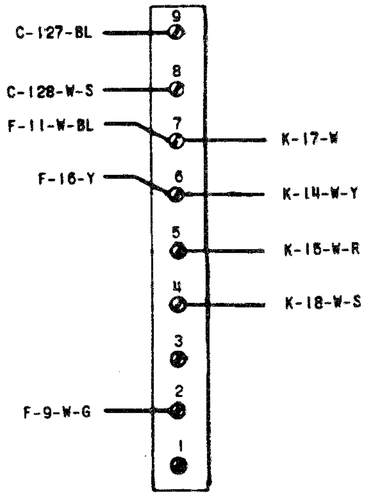
R
TYPING UNIT CONNECTOR (FEMALE)



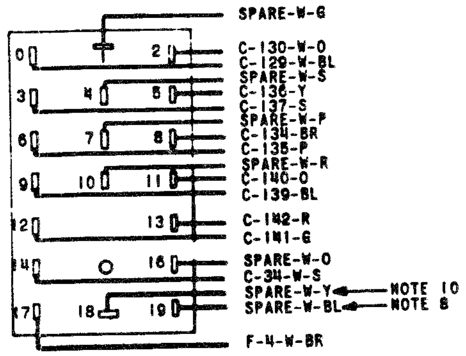
S
TERMINAL BLOCK



T
TERMINAL BLOCK



U
TRANSMITTER DISTRIBUTOR CONNECTOR (FEMALE)



SHEET 2 OF 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU32

APPROVALS

D AND R	E OF M
------	------

E-NUMBER

PROD. NO. 3642WD

DATE 12-12-58

R.D. FILE NO. 6-159.65AA

DRAWN	CHKD.
ENGD. D.C.L.	APPD.

TELETYPE
CORPORATION

6

3642WD

3643 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
A	8-4-59	28-11508
B	10-5-59	28-11799
C	[illegible]-61	68[illegible]
D	[illegible]-26-62	69766
E	11-26-63	78860

SPARE LEADS (TIED TO MAIN CABLE)
RECTIFIER 115 V.D.C. OUTPUT 300 MA
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
375A FUSE
FIG. C SIGNAL GENERATING CIRCUIT
TRANS CONTACTS
TRANS AUX A CONTACT
DIST. CONTACTS
DIST. AUX CONTACT
STOP
NOTE 19 a
NOTE 19 b
A.C. MOTOR, GOVERNED (NOTE 8)
SERIES FIELD WINDING
CENTRIFUGAL GOVERNOR
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED MOTOR UNIT ONLY) (NOTE 7)
NOTE 3
GROUNDED SIDE
115 VOLTS A.C. (NOTE 8)
POWER INPUT
CONVENIENCE RECEPT.
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) NOTE 7
6 1/4 AMP SLO-BL FUSE
POWER SWITCH
LIGHT SWITCH (IN CABINET)
MAINT. ON
NORMAL ON
OFF
A.C. MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR SEE ABOVE)
BACKSPACE SWITCH (ON KEYBOARD)
BACKSPACE MAGNET (ON PERFORATOR)
OPERATING WINDING
STARTING WINDING
STARTING CAPACITOR
THERMAL CUTOUT
MOTOR START RELAY
PAPER FEED OUT SWITCH (IN KEYBOARD)
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
END-OF-LINE INDICATOR SWITCH (IN KEYBOARD)
SELECTOR SWITCH (IN KEYBOARD)
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END-OF-LINE MARGIN IND. LAMP
6V LAMPS (IN CABINET)
COPY LAMPS
PERF. LAMP
PRI. 117 VAC
SEC. 5.5 VAC
LINE SHUNT RELAY
MANUAL AND TIGHT TAPE SWITCH (IN TRANS. DIST.)
CLUTCH MAGNETS (IN TRANS. DIST.)
TAPE OUT SWITCH (IN TRANS. DIST.)
SIGNAL BELL (IN CABINET)
LOCK BAR SWITCH (IN KEYBOARD)
AUX. SWITCH
TIME DELAY CONTACTS (IN KEYBOARD)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
RECTIFIER 120 MA 115 V.D.C. OUTPUT
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
NOTE 18
NOTE 9
NOTE 9b
NOTE 10a
NOTE 10b
NOTE 11C
NOTE 14
NOTE 16
DC-
DC+
3750 Ω
LINE TEST KEY
SELECTOR MAGNETS (ON TYPING UNITS)
NOTE 6
SPARE LEADS BROUGHT INTO ELECTRICAL SERVICE UNIT CONTAINER AND TAPED
NOTE 17
ELECTRICAL NOISE SUPP. CONTACTS (IN TRANSMITTER DISTRIBUTOR)
SIGNAL GENERATOR CONTACTS (IN TRANSMITTER DISTRIBUTOR)
MARKING
SPACING
LOCK BAR SWITCH (IN KEYBOARD)
SIGNAL GENERATOR CONTACTS (IN KEYBOARD)
ELECTRICAL NOISE SUPPRESSOR
SIGNAL LINE BREAK SWITCH (IN KEYBOARD)
NOTE 15
NOTE 21
LINE SHUNT RELAY CONTACTS
AUX. CONTACTS (IN LINE SHUNT RELAY)
SIGNAL LINE CONTACTS
AUX. CONTS.
LINE TEST KEY
HORIZONTAL TABULATOR XD CONTROL CONTACTS (ON TYPING UNIT)
FORM START XD CONTROL CONTACTS (ON TYPING UNIT)
PERFORATOR LO-TAPE SWITCH
NOTE 12
FORM PAPER OUT ALARM CONTACTS (NOTE 13)
REPERFORATOR CONTROL CONTACTS (IN TYPING UNIT STUNT BOX)
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
SIGNAL LINE
FOR CUSTOMERS USE
A

SHEET 1 OF 2

APPROVALS	
D AND R	E OF M

E NUMBER

PROD. NO. 3643 WD

SCHEMATIC
WIRING DIAGRAM
MODEL 28

WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 32
AND ASSOCIATED
UNITS

DATE 12-0-58

P.D FILE NO G-159,65AA

DRAWN | CHKD

ENGD D.C.L. | APPD.

TELETYPE
CORPORATION

3643 WD

RECTIFIER (115 V.D.C. OUTPUT 300 MA)
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
375A FUSE
SPARE LEADS (TIED TO MAIN CABLE)
FIG. C SIGNAL GENERATING CIRCUIT
TRANS CONTACTS
TRANS AUX A CONTACT
DIST CONTACTS
DIST AUX CONTACT
STOP
NOTE 19a
A
115 VOLTS A.C. (NOTE 8) POWER INPUT
GROUNDED SIDE
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) NOTE 7
CONVENIENCE RECEPT.
6 1/4 AMP SL.BL. FUSE
POWER SWITCH
A.C. MOTOR, GOVERNED (NOTE 8)
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY) (NOTE 7)
LIGHT SWITCH (IN CABINET)
BACKSPACE SWITCH (ON KEYBOARD)
A.C. MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR SEE ABOVE)
BACKSPACE MAGNET (ON PERFORATOR)
THERMAL CUTOUT
OPERATING WINDING
STARTING WINDING
STARTING CAPACITOR
PAPER FEED OUT SWITCH (IN KEYBOARD)
MOTOR START RELAY
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END-OF-LINE INDICATOR SWITCH (IN KEYBOARD)
SELECTOR SWITCH (IN KEYBOARD)
MARGIN IND LAMP
END-OF-LINE (IN CABINET)
COPY LAMPS
6V LAMPS
PERF LAMP
LINE SHUNT RELAY
MANUAL AND TIGHT TAPE SWITCH
CLUTCH MAGNETS (IN TRANS DIST.)
TAPE OUT SWITCH (IN TRANS DIST.)
SIGNAL BELL (IN CABINET)
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
LOCK BAR SWITCH (IN KEYBOARD)
AUX SWITCH
TIME DELAY CONTACTS (IN KEYBOARD)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
RECTIFIER 120 MA 115V D.C. OUTPUT
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
NOTE 18
NOTE 19b
NOTE 9a
NOTE 9b
NOTE 10
NOTE 11C
NOTE 16
AC
A
DC−
DC+
3750 Ω
LINE TEST KEY
SELECTOR MAGNETS (ON TYPING UNITS)
SPARE LEADS BROUGHT INTO ELECTRICAL SERVICE UNIT CONTAINER AND TAPED.
ELECTRICAL NOISE SUPP GENERATOR CONTACTS (IN TRANSMITTER DISTRIBUTOR)
SIGNAL GENERATOR CONTACTS (IN KEYBOARD)
ELECTRICAL NOISE SUPPRESSOR
LOCK BAR SWITCH (IN KEYBOARD)
SIGNAL LINE BREAK SWITCH (IN KEYBOARD)
MARKING
SPACING
LINE SHUNT RELAY CONTACTS
AUX CONTACTS (IN LINE SHUNT RELAY)
SIGNAL LINE CONTACTS
AUX CONTACTS
LINE TEST KEY
FORM PAPER OUT ALARM CONTACTS (NOTE 13)
REPERFORATOR CONTROL CONTACTS (IN TYPING UNIT STUNT BOX)
HORIZONTAL TABULATOR XD CONTROL CONTACTS (ON TYPING UNIT)
FORM START XD CONTROL CONTACTS (ON TYPING UNIT)
PERFORATOR LO-TAPE SWITCH
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
SIGNAL LINE
FOR CUSTOMER'S USE
NOTE 3
NOTE 6
NOTE 12
NOTE 17
NOTE 21

3643 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	8-4-59	28-11508
B	10-5-59	28-11795
C	[illegible] 61	[illegible]
D	3-26-62	69766
E	11-26-63	78860

SHEET 1 OF 2

APPROVALS

D AND R	E OF M

E NUMBER

PROD NO. 3643 WD

SCHEMATIC
WIRING DIAGRAM
MODEL 28

WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 32
AND ASSOCIATED
UNITS

DATE 12-0-58

P.D FILE NO G-159,65AA

DRAWN

CHKD

ENGD D.C.L.

APPD

TELETYPE
CORPORATION

3643 WD

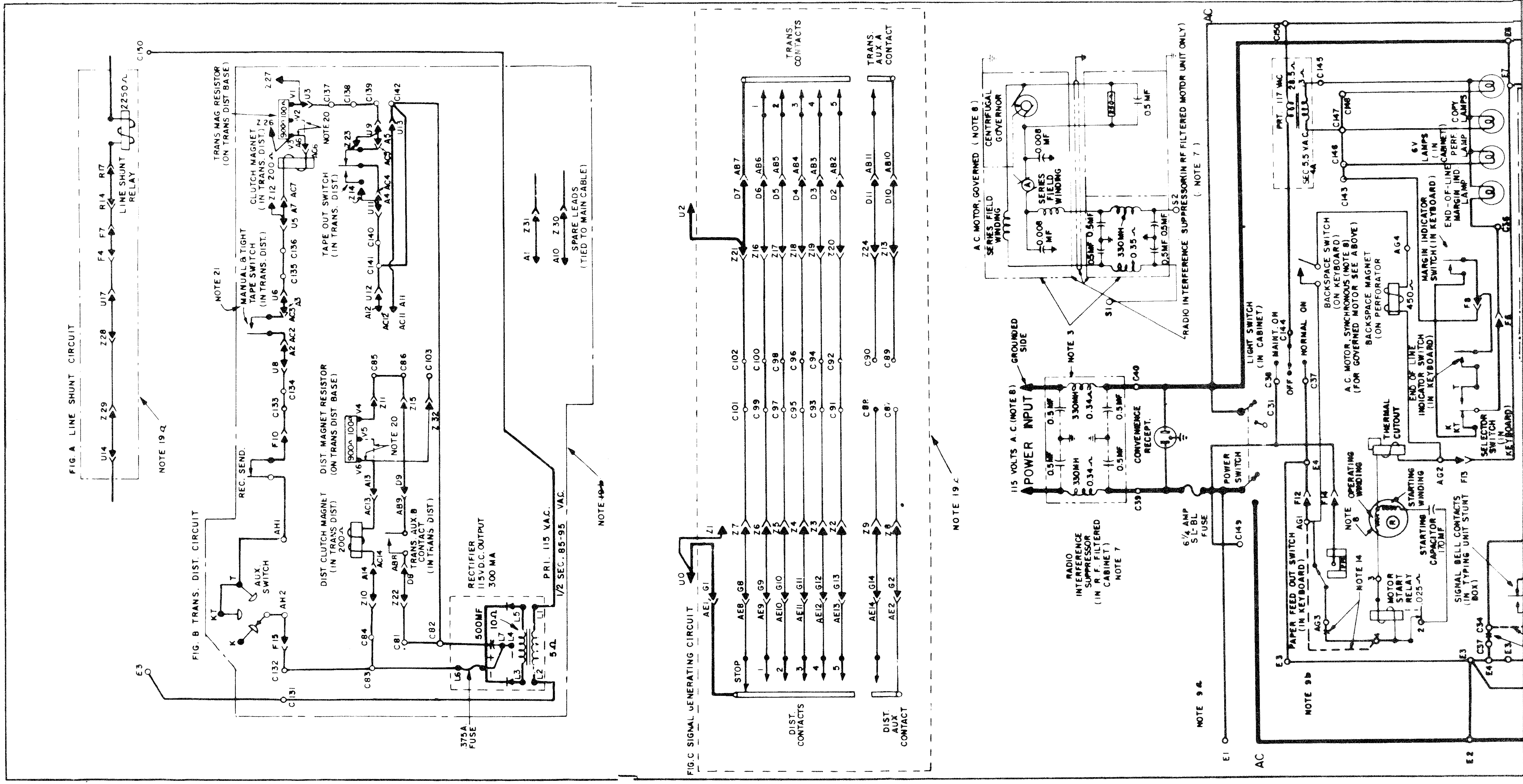


FIG. A LINE SHUNT CIRCUIT
LINE SHUNT RELAY
2250 ∿
NOTE 19a
FIG. B TRANS. DIST. CIRCUIT
REC. SEND.
AUX SWITCH
MANUAL & TIGHT TAPE SWITCH (IN TRANS. DIST.)
NOTE 21
CLUTCH MAGNET (IN TRANS. DIST.) Z12 200∿
TRANS MAG RESISTOR (ON TRANS DIST BASE)
TAPE OUT SWITCH (IN TRANS. DIST.)
NOTE 20
DIST. MAGNET RESISTOR (ON TRANS DIST BASE)
DIST CLUTCH MAGNET (IN TRANS DIST) 200∿
TRANS. AUX.B CONTACT (IN TRANS DIST)
RECTIFIER 115 V.D.C. OUTPUT 300 MA
500MF
PRI. 115 V.A.C.
1/2 SEC. 85-95 V.A.C.
375A FUSE
SPARE LEADS (TIED TO MAIN CABLE)
NOTE 19b
FIG.C SIGNAL GENERATING CIRCUIT
TRANS. CONTACTS
TRANS. AUX A CONTACT
DIST. CONTACTS
DIST. AUX CONTACT
STOP
NOTE 19c
A.C. MOTOR, GOVERNED (NOTE 8)
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
.008 MF
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY) (NOTE 7)
NOTE 3
GROUNDED SIDE
115 VOLTS A.C. (NOTE 8)
POWER INPUT
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) NOTE 7
CONVENIENCE RECEPT.
6 1/4 AMP SL-BL FUSE
POWER SWITCH
NOTE 9a
NOTE 9b
LIGHT SWITCH (IN CABINET)
MAINT. ON
NORMAL ON
OFF
BACKSPACE SWITCH (ON KEYBOARD)
A.C. MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR SEE ABOVE)
BACKSPACE MAGNET (ON PERFORATOR) 450∿
THERMAL CUTOUT
OPERATING WINDING
STARTING WINDING
STARTING CAPACITOR 170MF
MOTOR START RELAY .025∿
NOTE 14
PAPER FEED OUT SWITCH (IN KEYBOARD)
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
PRT. 117 VAC
SEC 5.5 VAC 4A
6V LAMPS
COPY LAMPS
PERF LAMP
END-OF-LINE MARGIN IND LAMP
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END OF LINE INDICATOR SWITCH (IN KEYBOARD)
SELECTOR SWITCH (IN KEYBOARD)
AC

A

<table>
<tr><th>NO.</th><th>NOTES</th></tr>
<tr><td>1</td><td>FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:<table><tr><th>WD NUMBER</th><th>UNITS DIRECTLY OPERABLE WITH LESU32</th></tr><tr><td></td><td>CABINETS - LAAC 200, 201
ELECTRICAL SERVICE UNIT LESU
KEYBOARDS - LAK
MOTOR UNITS - LMU
PAGE TYPING UNITS - LP
PAGE TYPING UNITS - LP</td></tr></table></td></tr>
<tr><td>2.</td><td>LEGEND
○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU).
○ B LINE TEST KEY TERMINAL BLOCK (IN LESU).
○ C CABINET TERMINAL BLOCK.
○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU).
○ E POWER TERMINAL BLOCK (IN LESU)
◀ F KEYBOARD CONNECTOR.
○ J ① TERMINAL STRIP (ON LINE RELAY ASSEM. IN LESU)
◀ J ② LINE RELAY CONNECTOR (IN LESU).
● J ③ LINE RELAY FILTER (IN LESU).
○ K TERMINAL STRIP (ON LINE TEST KEY IN LESU)
◀ R TYPING UNIT CONNECTOR
○ S SLOW RELEASE RELAY TERMINAL BOARD (IN LESU).
○ T TEST SWITCH TERMINAL BOARD (IN LESU).
◀ U TRANSMITTER DISTRIBUTOR CONNECTOR
○ AG MOTOR TERMINAL BLOCK (ON LAK).
○ AH AUXILLARY SWITCH TERMINAL BLOCK (ON LAK).
◀ Z TRANSMITTER DISTRIBUTOR CONNECTOR (LBXD)</td></tr>
<tr><td>3</td><td>DOT DASH —·—·— LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.</td></tr>
<tr><td>4</td><td>ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.</td></tr>
<tr><td>5.</td><td>a. RESISTANCE IN OHMS (Ω)
b. INDUCTANCE VALUES IN MICROHENRIES (MH)
c. CAPACITANCE VALUES IN MICROFARADS (MF)</td></tr>
<tr><td>6</td><td>CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION FOR .020 AMP LINE CURRENT, ADD DASHED (- - -) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—) IN LINE TEST KEY, LINE RELAY, AND ELECTRICAL MOTOR CONTROL START MAGNETS CIRCUITS.</td></tr>
<tr><td>7.</td><td>a. USE POWER & SIGNAL LINE SUPPRESSOR AND SYNC OR GOV.-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE.
b. FOR OTHER INSTALLATIONS, OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECTLY TO TERMINALS SHOWN.</td></tr>
<tr><td>8.</td><td>USE SYNCHRONOUS MOTOR ON REGULATED 60~(±1%) A.C. POWER ONLY. GOVERNED MOTORS & OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~ UNREGULATED A.C.</td></tr>
<tr><td>9.</td><td>RECTIFIER SHOWN CONTROLLED BY POWER SWITCH
a. FOR CONTINUOUS OPERATION, MOVE RECTIFIER LEAD L2 FROM E2 TO E1.
b. FOR OPERATION FROM MOTOR CONTROL, MOVE L2 LEAD FROM E2 TO E3.</td></tr>
<tr><td>10.</td><td>a. TO OPERATE MOTOR CONTROL, SET MUST BE EQUIPPED WITH EITHER:
1. TIME DELAY MECH. OR
2. MOTOR STOP CONTACTS.
b. IF TAPE POSITION IS TO BE USED IN THE ASR SET THE TIME DELAY MECHANISM MUST BE EITHER ELECTRICALLY OR MECHANICALLY DISABLED.</td></tr>
<tr><td>11.</td><td>a. LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHOWN SHUNTING SELECTOR MAGNETS TRANS. DIST. SIG. GEN. AND KEYBOARD SIG. GEN.
(CONT'D ABOVE)
b. IF KEYBOARD SHUNTING IS NOT DESIRED MOVE STRAP FROM C10 TO C9.
c. FOR DIRECT CONTROL OF LINE SHUNT RELAY FROM POWER SWITCH, ADD DASHED (- - -) CONNECTIONS AND OMIT CONNECTION MARKED (—✕—) AT CABINET TERMINALS C34, C35, C37. CUSTOMER MAY THEN SELECT PORTION OF SIGNAL LINE CIRCUIT TO BE SHUNTED BY CONNECTING TERMINAL C13 TO EITHER C9, C10, C11, OR C15.</td></tr>
<tr><td>12.</td><td>CIRCUIT SHOWS BOTH HORIZONTAL TABULATOR AND FORM START CONTROL USED ON TYPING UNIT. WHEN ONLY ONE CONTROL IS USED, OMIT CONNECTION MARKED (—✕—) AND ADD PROPER DASHED (- - -) CONNECTION IN TYPING UNIT CIRCUITS.</td></tr>
<tr><td>13.</td><td>FORM PAPER OUT ALARM CONTACTS MAY BE MOUNTED ON EITHER THE TYPING UNIT OR EXTERNAL TO THE CABINET. IN LATTER EVENT, CONNECTIONS ARE MADE DIRECTLY TO TERMINALS C25 AND C26.</td></tr>
<tr><td>14.</td><td>WHEN PAPER FEED OUT SWITCH IS NOT USED, DISCONNECT MOTOR LEAD FROM AG3 AND CONNECT TO AG1.</td></tr>
<tr><td>15.</td><td>WHEN SIGNAL LINE BREAK SWITCH IS NOT USED IN KEYBOARD ADD (- - -) CONNECTION AT CABINET TERMINAL BLOCK BETWEEN C10 & C11.</td></tr>
<tr><td></td><td></td></tr>
<tr><td>16.</td><td>IN ALL KEYBOARDS F4 MUST BE CONNECTED TO F7
IN ALL TRANS. DIST. U14 MUST BE CONNECTED TO U17.
IN ALL TYPING UNITS R14 MUST BE CONNECTED TO R17.</td></tr>
<tr><td>17.</td><td>SPARE LEADS FROM U18 AND F18 ARE RESERVED FOR POLAR OPERATION OF SIGNAL GENERATOR.</td></tr>
<tr><td>18.</td><td>WHEN LBXD IS USED IN PLACE OF LXD:<table><tr><th>OMIT</th><th>ADD</th></tr><tr><td>C-142 TO C-150
C-131 TO C-132</td><td></td></tr></table></td></tr>
<tr><td>19.</td><td>WHEN LBXD USED IN PLACE OF LXD USE FOLLOWING FIGURES.
a. FIG A ·—·—· LINE SHUNT CIRCUIT
b. FIG B ——·—— TRANS. DIST. CIRCUIT
c. FIG C - - - - - SIGNAL GENERATING CIRCUIT</td></tr>
<tr><td>20</td><td>CIRCUIT SHOWN FOR 115 V.D.C. POWER INPUT TO TRANS. DIST. CLUTCH MAGNETS. FOR 48 V.D.C. POWER INPUT REMOVE AND ADD CONNECTIONS AS FOLLOWS:
DISCONNECT THE WHITE LEAD FROM V6 AND CONNECT TO V5. DISCONNECT THE PURPLE LEAD FROM V3 AND CONNECT TO V2
POWER SUPPLY MUST DELIVER 300 MA @ 48 V.D.C. OR 200 MA @ 115 V.D.C.</td></tr>
<tr><td>21</td><td>COMPONENT OF 8IDI SYSTEM TO BE WIRED TO TERMINALS D8 AND D4.</td></tr>
<tr><td></td><td></td></tr>
</table>

3643 WD

REVISIONS

ISSUE	DATE	AUTH. NO
E	11-26-63	78860

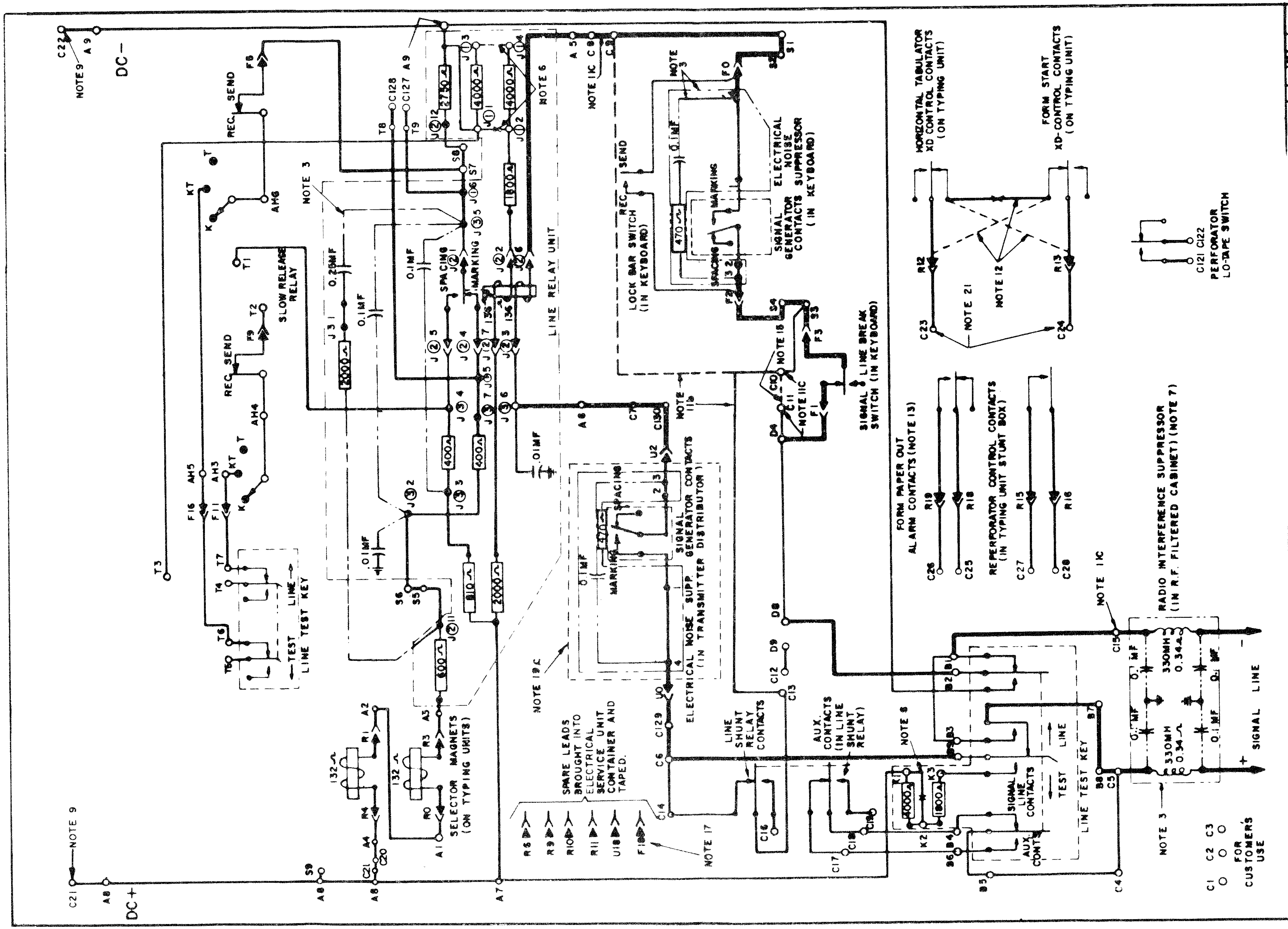
SHEET 2 OF 2

SCHEMATIC
WIRING DIAGRAM
MODEL 28

WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 32
AND ASSOCIATED
UNITS

TELETYPE
CORPORATION

3643WD



SEE SHEET 2 FOR NOTES

3659 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
A	8 - 4 - 59	28-11508
B	3-28-62	69768-10
C	11-26-63	78860

SHEET 1 OF 2

APPROVALS	
D AND .D	E OF M

E NUMBER

PROD. NO. 3659 WD

SCHEMATIC WIRING DIAGRAM MODEL 28 ASR-GP-OPT. I.A.C. WITH FACILITIES PROVIDED BY ELECT. SERVICE UNIT LESU 35 AND ASSOCIATED UNITS

DATE: 1-19-59

P.D. FILE NO. G-159.65AA

DRAWN K.F.L.	CHKD.
ENGD. J.R.H.	APPD.

TELETYPE
CORPORATION

3659 WD

NO.	NOTES
	b. IF KEYBOARD SHUNTING IS NOT DESIRED MOVE STRAP FROM C10 TO C9. C. FOR DIRECT CONTROL OF LINE SHUNT RELAY FROM POWER SWITCH, ADD DASHED (---) CONNECTIONS AND OMIT CONNECTION MARKED (—✱—) AT CABINET TERMINALS C34, C35, C37. CUSTOMER MAY THEN SELECT PORTION OF SIGNAL LINE CIRCUIT TO BE SHUNTED BY CONNECTING TERMINAL C13 TO EITHER C9, C10, C11, OR C15.
12.	CIRCUIT SHOWS BOTH HORIZONTAL TABULATOR AND FORM START CONTROL USED ON TYPING UNIT. WHEN ONLY ONE CONTROL IS USED, OMIT CONNECTION MARKED (—✱—) AND ADD PROPER DASHED (---) CONNECTION IN TYPING UNIT CIRCUITS.
13.	FORM PAPER OUT ALARM CONTACTS MAY BE MOUNTED ON EITHER THE TYPING UNIT OR EXTERNAL TO THE CABINET. IN LATTER EVENT, CONNECTIONS ARE MADE DIRECTLY TO TERMINALS C25 AND C26.
14.	WHEN PAPER FEED OUT SWITCH IS NOT USED, DISCONNECT MOTOR LEAD FROM AG3 AND CONNECT TO AG1.
15.	WHEN SIGNAL LINE BREAK SWITCH IS NOT USED IN KEYBOARD ADD (—·—) CONNECTION AT CABINET TERMINAL BLOCK BETWEEN C10 & C11.
16.	IN ALL KEYBOARDS F4 MUST BE CONNECTED TO F7. IN ALL TRANS. DIST. U14 MUST BE CONNECTED TO U17. IN ALL TYPING UNITS R14 MUST BE CONNECTED TO R17.
17.	SPARE LEADS FROM U18 AND F18 ARE RESERVED FOR POLAR OPERATION OF SIGNAL GENERATOR.
18.	WHEN LBXD IS USED IN PLACE OF LXD: (see table below)
19.	WHEN LBXD USED IN PLACE OF LXD USE FOLLOWING FIGURES: a. FIG. A ———— LINE SHUNT CIRCUIT b. FIG. B ———— TRANS. DIST. CIRCUIT c. FIG. C ———— SIGNAL GENERATING CIRCUIT
20	CIRCUIT SHOWN FOR 115 V.D.C. POWER INPUT TO TRANS. DIST CLUTCH MAGNETS. FOR 48 V.D.C. POWER INPUT REMOVE AND ADD CONNECTIONS AS FOLLOWS: DISCONNECT THE WHITE LEAD FROM V6 AND CONNECT TO V5. DISCONNECT THE PURPLE LEAD FROM V3 AND CONNECT TO V2 POWER SUPPLY MUST DELIVER 300 MA @ 48 V.D.C. OR 200 MA @ 115 V.D.C.
21.	WHEN LXD5 IS USED, REMOVE THE STRAP BETWEEN TERMINALS C135-C136. ADD TWO 162365 STRAPS, ONE BETWEEN TERMINALS C23-C135 AND ONE BETWEEN TERMINALS C24-C136

Note 18 table:

OMIT	ADD
C-142 TO C-150 C-131 TO C-132	

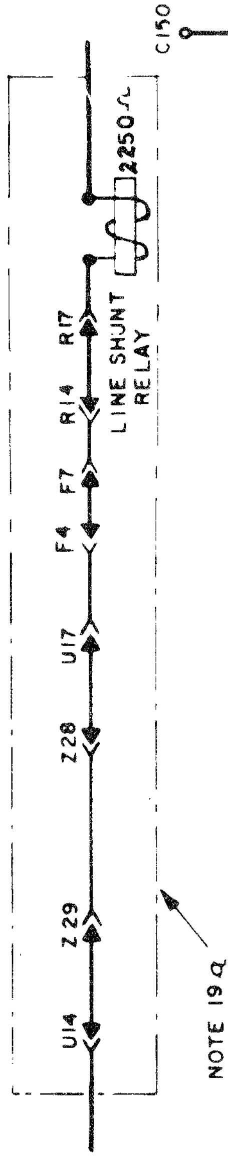


FIG. A LINE SHUNT CIRCUIT

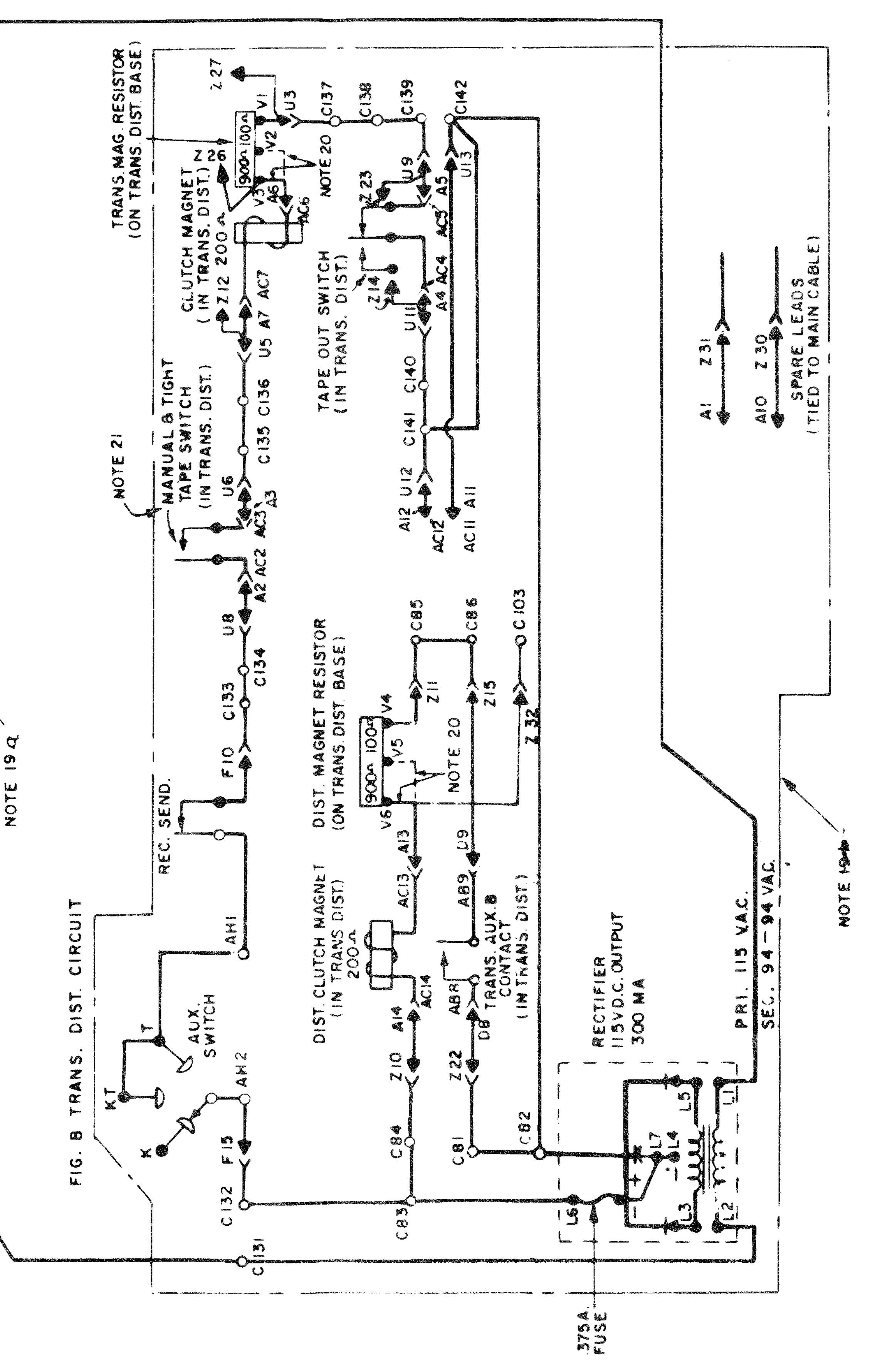

TRANS. MAG. RESISTOR (ON TRANS DIST BASE)
CLUTCH MAGNET (IN TRANS. DIST.) 200Ω
Z27
V1
V2
V3
C137
C138
C139
C142
U13
NOTE 20
TAPE OUT SWITCH (IN TRANS. DIST.)
MANUAL & TIGHT TAPE SWITCH (IN TRANS. DIST.)
NOTE 21
C135
C136
C134
C133
C140
C141
U12
U11
REC. SEND.
AUX. SWITCH
KT
AH1
AH2
F10
F15
DIST. MAGNET RESISTOR (ON TRANS DIST BASE)
DIST. CLUTCH MAGNET (IN TRANS DIST) 200Ω
TRANS. AUX B CONTACT (IN TRANS DIST)
C85
C86
C103
Z11
Z15
Z32
NOTE 20
C84
C81
C82
C83
C132
C131
E3
RECTIFIER 115 V.D.C. OUTPUT 300 MA
PRI. 115 VAC.
SEC. 94-94 VAC.
.375A FUSE
A1
Z31
A10
Z30
SPARE LEADS (TIED TO MAIN CABLE)
NOTE 19b

FIG. B TRANS. DIST. CIRCUIT

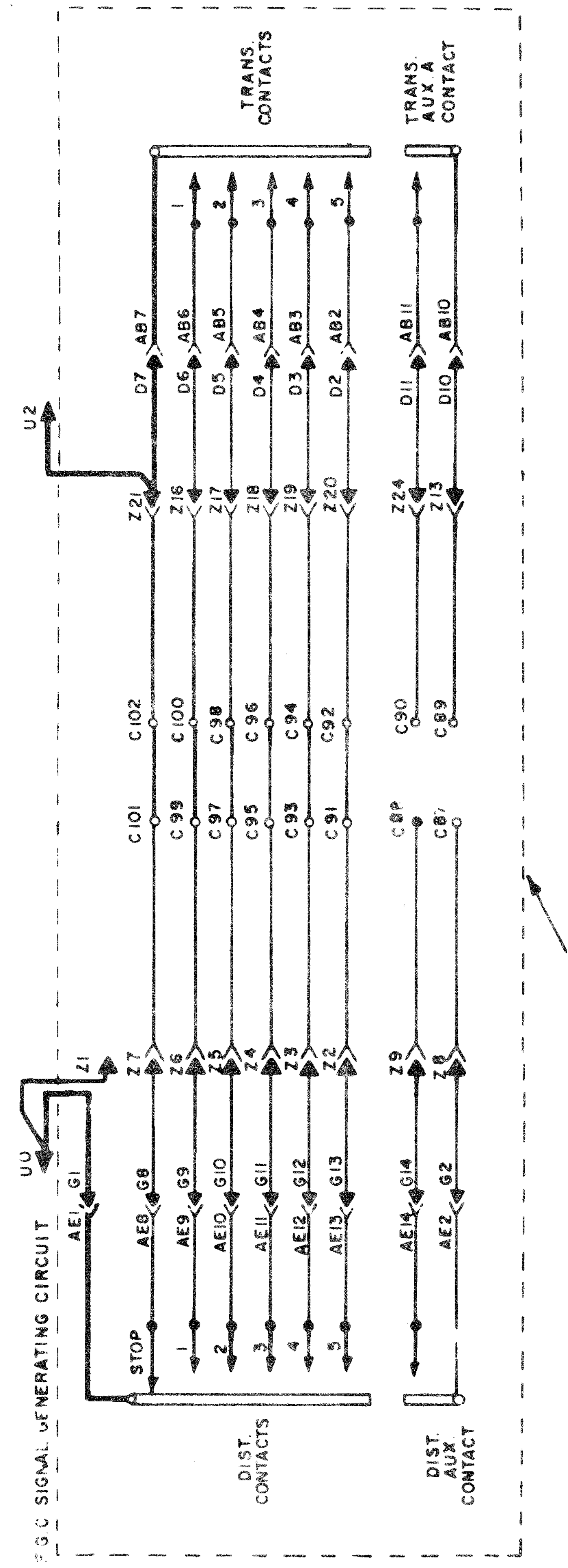
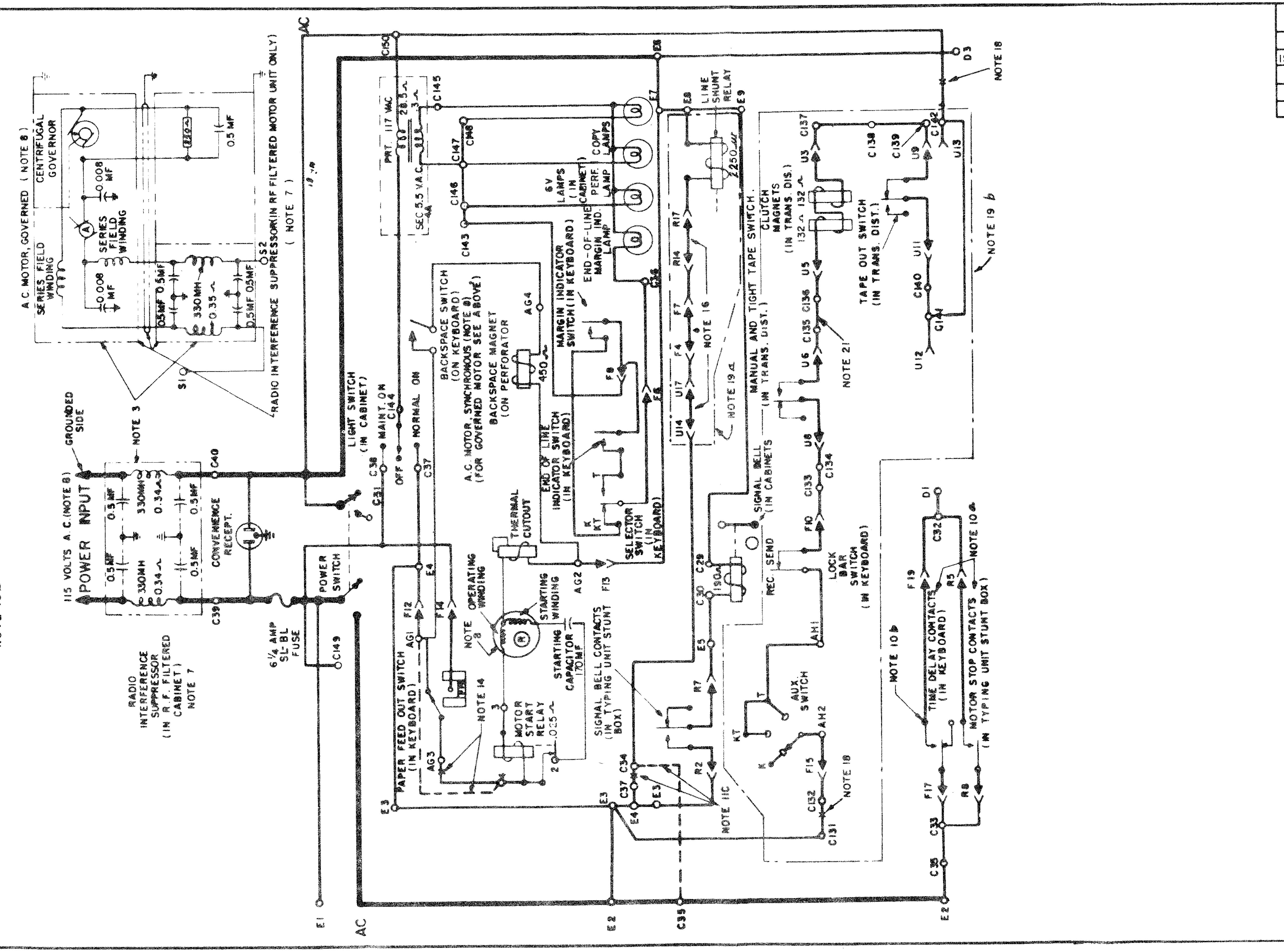


FIG. C SIGNAL GENERATING CIRCUIT


AC
A.C. MOTOR, GOVERNED (NOTE 8)
SERIES FIELD WINDING
CENTRIFUGAL GOVERNOR
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY) (NOTE 7)
NOTE 3
GROUNDED SIDE
115 VOLTS A.C. (NOTE 8) POWER INPUT
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) NOTE 7
CONVENIENCE RECEPT.
6 1/4 AMP SL-BL FUSE
POWER SWITCH
LIGHT SWITCH (IN CABINET)
MAINT. ON
NORMAL ON
OFF
BACKSPACE SWITCH (ON KEYBOARD)
A.C. MOTOR SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR SEE ABOVE)
BACKSPACE MAGNET (ON PERFORATOR)
THERMAL CUTOUT
OPERATING WINDING
STARTING WINDING
STARTING CAPACITOR
MOTOR START RELAY
PAPER FEED OUT SWITCH (IN KEYBOARD)
NOTE 14
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END-OF-LINE INDICATOR SWITCH (IN KEYBOARD)
SELECTOR SWITCH (IN KEYBOARD)
6V LAMPS (IN CABINET)
COPY LAMPS
PERF. LAMP
MARGIN LAMP
END-OF-LINE LAMP
LINE SHUNT RELAY
2250Ω
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
SIGNAL BELL (IN CABINET)
MANUAL AND TIGHT TAPE SWITCH (IN TRANS. DIST.)
CLUTCH MAGNETS (IN TRANS. DIST.) 132Ω 132Ω
TAPE OUT SWITCH (IN TRANS. DIST.)
REC. SEND.
AUX. SWITCH
LOCK BAR SWITCH (IN KEYBOARD)
TIME DELAY CONTACTS (IN KEYBOARD)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
NOTE 10a
NOTE 10b
NOTE 11c
NOTE 16
NOTE 18
NOTE 19b
NOTE 21
PRI. 117 VAC.
SEC. 5.5 VAC.
C40
C39
C145
C146
C147
C148
C149
C150
E1
E2
E3
C35
D1
D3
D8

3659 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
C	11-26-63	78860

SHEET 2 OF 2

SCHEMATIC
WIRING DIAGRAM
MODEL 28
ASR-GP-OPT. I.A.C.
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 35
AND ASSOCIATED
UNITS

TELETYPE
CORPORATION

3659 WD

<table>
<tr><th>NO.</th><th>NOTES</th></tr>
<tr><td>1.</td><td>FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:
<table>
<tr><th>WD NUMBER</th><th>UNITS DIRECTLY OPERABLE WITH LESU</th></tr>
<tr><td></td><td>CABINETS - LAAC 200,201
ELECTRICAL SERVICE UNIT LESU
KEYBOARDS-LAK
MOTOR UNITS - LMU
PAGE TYPING UNITS-LP
PAGE TYPING UNITS-LP</td></tr>
</table></td></tr>
<tr><td>2.</td><td>LEGEND
○ A SELECTOR MAGNET TERMINAL BLOCK(IN LESU).
○ B LINE TEST KEY TERMINAL BLOCK (IN LESU).
○ C CABINET TERMINAL BLOCK.
○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU).
○ E POWER TERMINAL BLOCK (IN LESU)
≪ F KEYBOARD CONNECTOR.
○ J ① TERMINAL STRIP(ON LINE RELAY ASSEM. IN LESU)
≪ J ② LINE RELAY CONNECTOR (IN LESU).
● J ③ LINE RELAY FILTER (IN LESU).
○ K TERMINAL STRIP(ONLINE TEST KEY IN LESU)
≪ R TYPING UNIT CONNECTOR.
○ S SLOW RELEASE RELAY TERMINAL BOARD(IN LESU).
○ T TEST SWITCH TERMINAL BOARD(IN LESU).
≪ U TRANSMITTER DISTRIBUTOR CONNECTOR
○ AG MOTOR TERMINAL BLOCK (ON LAK).
○ AH AUXILLARY SWITCH TERMINAL BLOCK (ON LAK).
≪ Z TRANSMITTER DISTRIBUTOR CONNECTOR (LBXD)</td></tr>
<tr><td>3.</td><td>DOT DASH ——— LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.</td></tr>
<tr><td>4</td><td>ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.</td></tr>
<tr><td>5.</td><td>a. RESISTANCE IN OHMS (Ω)
b. INDUCTANCE VALUES IN MICROHENERIES (MH)
C. CAPACITANCE VALUES IN MICROFARADS (MF)</td></tr>
<tr><td>6.</td><td>CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD DASHED (---) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—) IN LINE TEST KEY, LINE RELAY, AND ELECTRICAL MOTOR CONTROL START MAGNETS CIRCUITS.</td></tr>
<tr><td>7.</td><td>a. USE POWER & SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV.-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE.
b. FOR OTHER INSTALLATIONS, OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECTLY TO TERMINALS SHOWN.</td></tr>
<tr><td>8.</td><td>USE SYNCHRONOUS MOTOR ON REGULATED 60~(±1%) A.C. POWER ONLY. GOVERNED MOTORS & OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~ UNREGULATED A.C.</td></tr>
<tr><td>9.</td><td>CIRCUIT SHOWN FOR OPERATION FROM AN EXTERNAL D.C POWER SUPPLY, LEADS OF WHICH ARE TO BE CONNECTED TO CABINET TERMINALS C21 AND C22.</td></tr>
<tr><td>10.</td><td>a. TO OPERATE MOTOR CONTROL, SET MUST BE EQUIPPED WITH EITHER:
1. TIME DELAY MECH. OR
2. MOTOR STOP CONTACTS.
b. IF TAPE POSITION IS TO BE USED IN THE ASR SET THE TIME DELAY MECHANISM MUST BE EITHER ELECTRICALLY OR MECHANICALLY DISABLED.</td></tr>
<tr><td>11.</td><td>a. LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHOWN SHUNTING LINE RELAY COIL, TRANS. DIST. SIG. GEN. AND KEYBOARD SIG. GEN.
(CONT'D ABOVE)</td></tr>
</table>

<table>
<tr><th>NO.</th><th>NOTES</th></tr>
<tr><td></td><td>b. IF KEYBOARD SHUNTING IS NOT DESIRED MOVE STRAP FROM C10 TO C9.
C. FOR DIRECT CONTROL OF LINE SHUNT RELAY FROM POWER SWITCH, ADD DASHED(---) CONNECTIONS AND OMIT CONNECTION MARKED(—✕—) AT CABINET TERMINALS C34, C35, C37. CUSTOMER MAY THEN SELECT PORTION OF SIGNAL LINE CIRCUIT TO BE SHUNTED BY CONNECTING TERMINAL C13 TO EITHER C9, C10, C11, OR C15.</td></tr>
<tr><td>12.</td><td>CIRCUIT SHOWS BOTH HORIZONTAL TABULATOR AND FORM START CONTROL USED ON TYPING UNIT. WHEN ONLY ONE CONTROL IS USED, OMIT CONNECTION MARKED (—✕—) AND ADD PROPER DASHED (---) CONNECTION IN TYPING UNIT CIRCUITS.</td></tr>
<tr><td>13.</td><td>FORM PAPER OUT ALARM CONTACTS MAY BE MOUNTED ON EITHER THE TYPING UNIT OR EXTERNAL TO THE CABINET. IN LATTER EVENT, CONNECTIONS ARE MADE DIRECTLY TO TERMINALS C25 AND C26.</td></tr>
<tr><td>14.</td><td>WHEN PAPER FEED OUT SWITCH IS NOT USED, DISCONNECT MOTOR LEAD FROM AG3 AND CONNECT TO AG1.</td></tr>
<tr><td>15.</td><td>WHEN SIGNAL LINE BREAK SWITCH IS NOT USED IN KEYBOARD ADD (—·—) CONNECTION AT CABINET TERMINAL BLOCK BETWEEN C10 & C11.</td></tr>
<tr><td></td><td></td></tr>
<tr><td>16.</td><td>IN ALL KEYBOARDS F4 MUST BE CONNECTED TO F7
IN ALL TRANS. DIST. U14 MUST BE CONNECTED TO U17.
IN ALL TYPING UNITS R14 MUST BE CONNECTED TO R17.</td></tr>
<tr><td>17.</td><td>SPARE LEADS FROM U18 AND F18 ARE RESERVED FOR POLAR OPERATION OF SIGNAL GENERATOR</td></tr>
<tr><td>18.</td><td>WHEN LBXD IS USED IN PLACE OF LXD:
<table>
<tr><th>OMIT</th><th>ADD</th></tr>
<tr><td>C-142 TO C-150
C-131 TO C-132</td><td></td></tr>
</table></td></tr>
<tr><td>19.</td><td>WHEN LBXD USED IN PLACE OF LXD USE FOLLOWING FIGURES:
a. FIG. A ________ LINE SHUNT CIRCUIT
b. FIG. B ________ TRANS. DIST. CIRCUIT
c. FIG. C ________ SIGNAL GENERATING CIRCUIT</td></tr>
<tr><td>20</td><td>CIRCUIT SHOWN FOR 115 V.D.C. POWER INPUT TO TRANS DIST CLUTCH MAGNETS. FOR 48 V.D.C. POWER INPUT REMOVE AND ADD CONNECTIONS AS FOLLOWS:
DISCONNECT THE WHITE LEAD FROM V6 AND CONNECT TO V5. DISCONNECT THE PURPLE LEAD FROM V3 AND CONNECT TO V2
POWER SUPPLY MUST DELIVER 300 MA @ 48 V.D.C. OR 200 MA @ 115 V.D.C.</td></tr>
<tr><td>21.</td><td>WHEN LXD5 IS USED, REMOVE THE STRAP BETWEEN TERMINALS C135-C136. ADD TWO 162365 STRAPS, ONE BETWEEN TERMINALS C23-C135 AND ONE BETWEEN TERMINALS C24-C136.</td></tr>
<tr><td></td><td></td></tr>
</table>

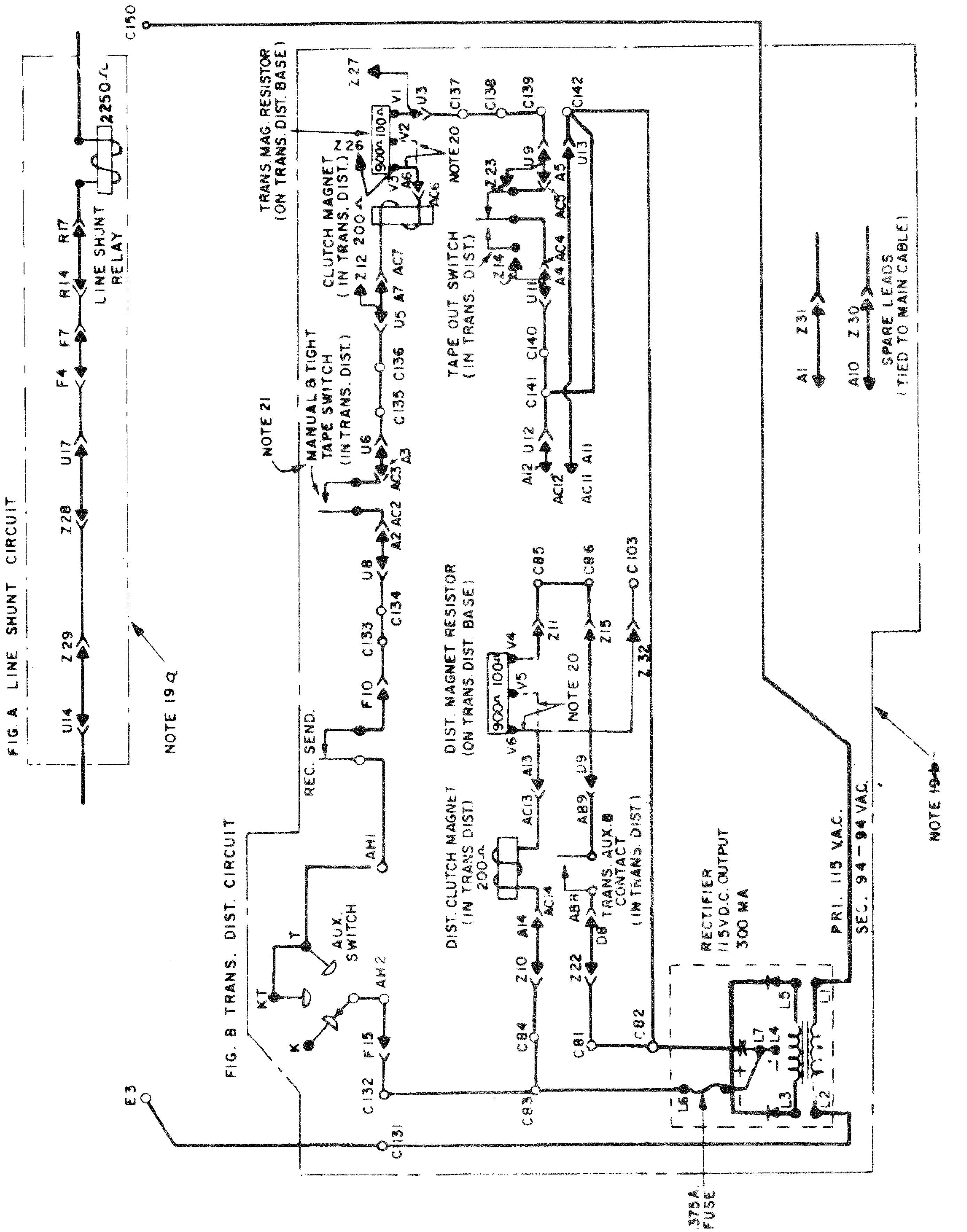


FIG. A LINE SHUNT CIRCUIT

FIG. B TRANS. DIST. CIRCUIT

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

ISSUE CONTROL RECORD

SHEET NO.	ISSUE 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	X	X	X	X														
2	X	X	X	X														

3660 WD

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
1	4-7-66	90222

ISSUE CONTROL
SHEET 1 OF 1

ACTUAL WIRING DIAGRAM FOR MODEL 28 ELECTRICAL SERVICE UNIT

ASR-GP-OPT 1-AK
LESU 35

WD NUMBER 3660 WD
DRAWN DGS
CHKD.
ENGD. JRH
APPD.

TELETYPE
CORPORATION

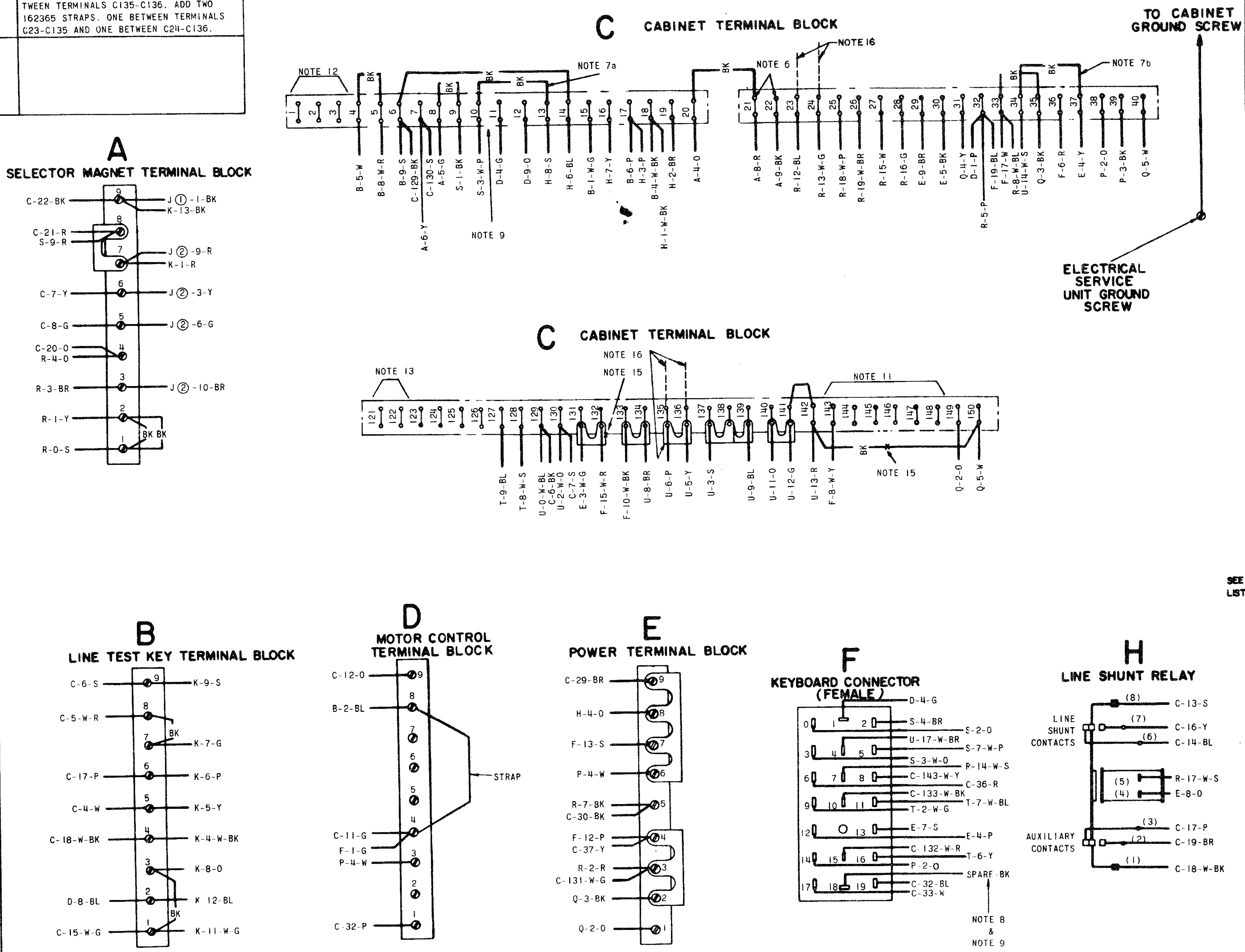
3660 WD

TC 482 (1-66)
SEE R&D ROUTINE #5
FOR USE OF THIS FORM

NO	NOTES
1.	WIRING LEGEND: A-1-W-BL A — DISTANT TERMINATING AREA 1 — DISTANT TERMINATING DESIGNATION W-BL — WIRE COLOR CODE
2.	COLOR CODE: BK-BLACK R-RED BL-BLUE O-ORANGE BR-BROWN S-SLATE G-GREEN W-WHITE P-PURPLE Y-YELLOW
3.	UNIT WIRED FOR 115 VOLTS 50 TO 60 CYCLE AC POWER INPUT ONLY.
4.	CONNECTORS VIEWED FROM SOLDERED TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION REMOVE AND ADD CONNECTIONS AS TABULATED BELOW.
6.	CIRCUIT SHOWN FOR OPERATION FROM AN EXTERNAL DC POWER SUPPLY, LEADS OF WHICH ARE TO BE CONNECTED TO CABINET TERMINALS C21 & C22. POSITIVE DC SHOULD BE CONNECTED TO TERMINAL C21.
7.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING LINE RELAY COIL AND KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATOR. a. IF KEYBOARD SHUNTING IS NOT DESIRED OR WHEN SIGNAL LINE BREAK SWITCH IS PRESENT, REMOVE THE BLACK STRAP CONNECTED BETWEEN TERMINALS C-10 AND C-13 AND CONNECT TERMINALS C-9 AND C-13 b. FOR DIRECT CONTROL OF THE LINE SHUNT RELAY FROM THE POWER SWITCH, REMOVE STRAP BETWEEN TERMINALS C-34 AND C-37 AND CONNECT TERMINALS C-34 AND C-35 TERMINAL C-13 MAY THEN BE CONNECTED TO EITHER TERMINALS C-9, C-10, C-11 OR C-15 TO OBTAIN THE DESIRED SHUNTING OF THE SIGNAL LINE CIRCUIT.
8.	THE SPARE LEADS FROM THE KEYBOARD AND TRANSMITTER DISTRIBUTOR UNITS CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT END OF THE ELECTRICAL SERVICE UNIT. THE SPARE LEADS FROM THE TYPING UNIT PLUG ARE TERMINATED IN THE LEFT END OF THE ELECTRICAL SERVICE UNIT.
9.	ADD STRAP BETWEEN C-10 & C-11 IF SIGNAL LINE BREAK SWITCH IS NOT USED.
10.	SPARE LEADS FROM F-18 AND U18 ARE RESERVED FOR POLAR OPERATION OF KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATORS.
11.	TERMINALS C-143, C148 RESERVED FOR CABINET LAMP OPERATION.
12.	TERMINALS C1-C3 RESERVED FOR CUSTOMERS USE.
13.	TERMINALS C-121, C-122 RESERVED FOR PERFORATOR LO TAPE SWITCH.
14.	CONTACTS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITION.
15.	WHEN LBXD USED IN PLACE OF LXD MAKE THE FOLLOWING CHANGES: OMIT CONNECTIONS C-142 TO C 150. C 131 TO C-132.
16.	WHEN LXD5 IS USED, REMOVE THE STRAP BETWEEN TERMINALS C135-C136. ADD TWO 162365 STRAPS. ONE BETWEEN TERMINALS C23-C135 AND ONE BETWEEN C24-C136.

Note 5 tabulation:

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTIONS ADDED
.020 AMP.	K1-K2, J ① 1-J ① 2	J ① 3-J ① 4



3660WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A2	8-4-59	28-11508
B3	3-20-61	69286
C4	3-28-62	69768-10
5	4-7-66	90222

NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR-GP-OPT.1-AC
LESU35

APPROVALS

D AND R	E OF M

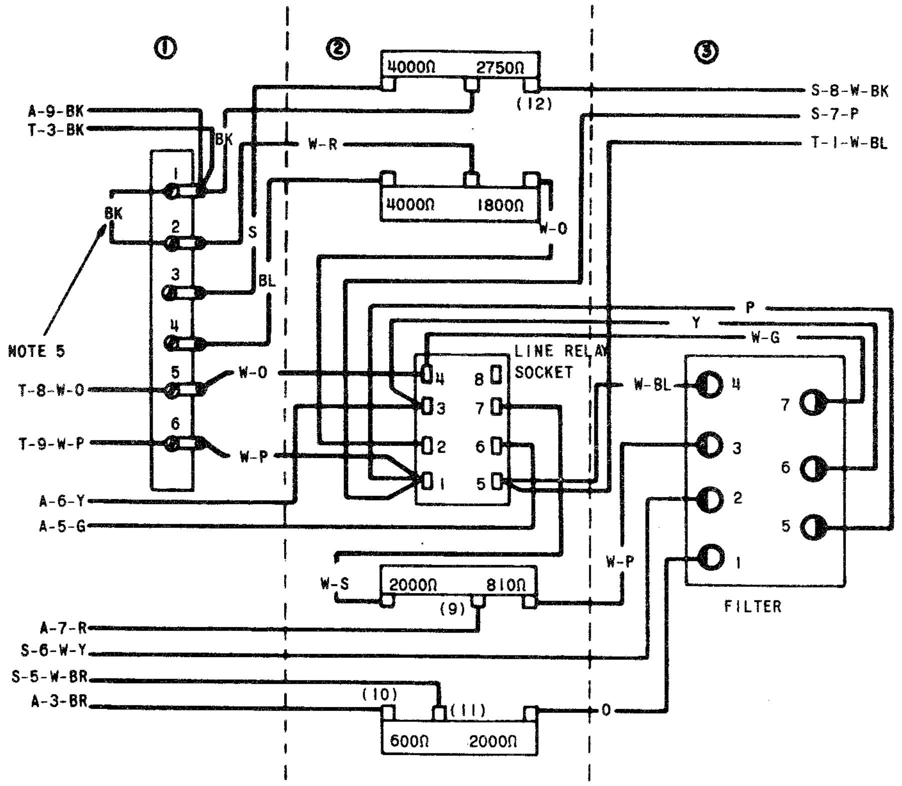
E-NUMBER
PROD. NO. 3660WD
DATE 1-19-59
P.D. FILE NO. G-159.65AA
DRAWN K.F.L.
CHKD.
ENGD. J.R.H.
APPD.

TELETYPE
CORPORATION

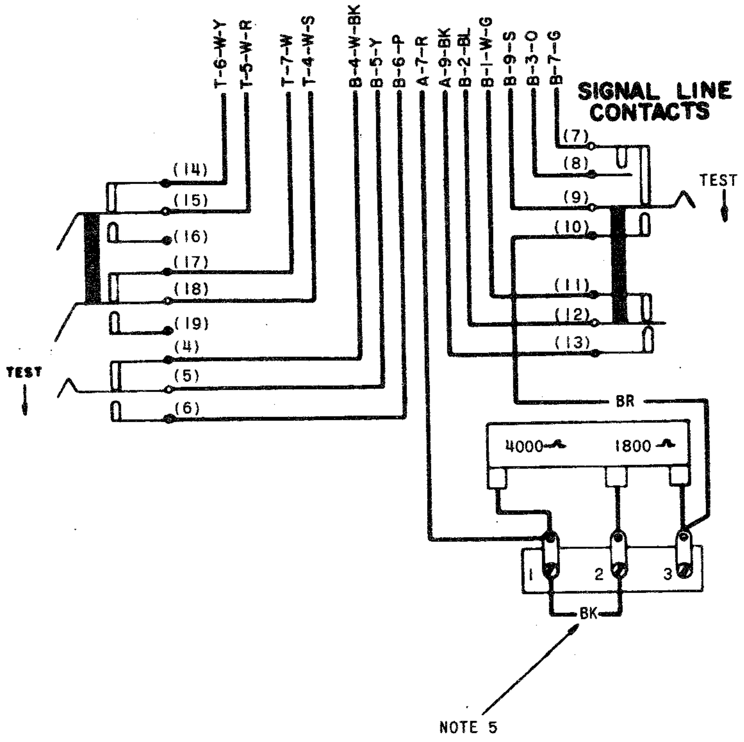
3660WD

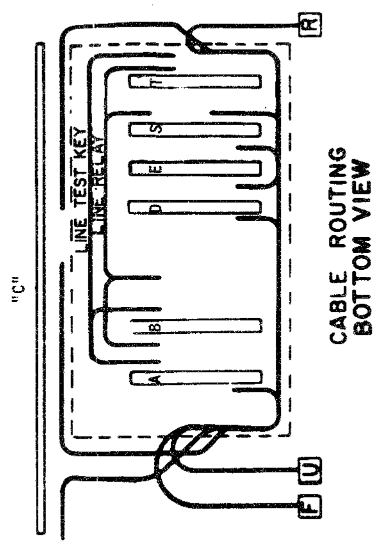
TC 424 (6-63)

J
LINE RELAY MOUNTING ASSEMBLY



K
LINE TEST KEY ASSEMBLY





NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

3660WD

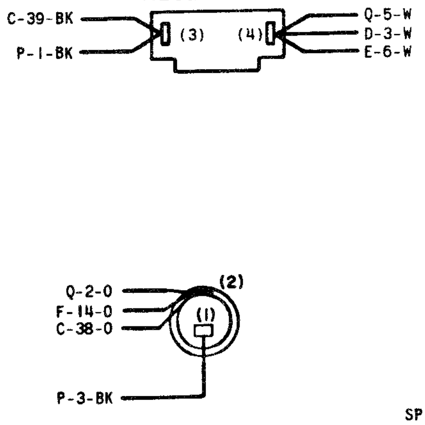
REVISIONS

ISSUE	DATE	AUTH. NO.
A2	8-4-59	28-11508
B3	3-20-61	69286
-C4	3-28-62	69768-10
-5	4-7-66	90222

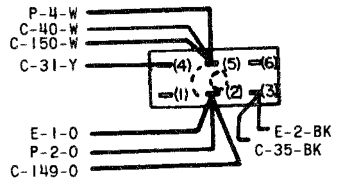
SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 2

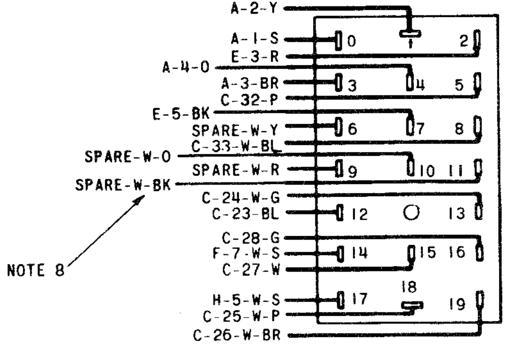
P
CONVENIENCE RECEPTACLE



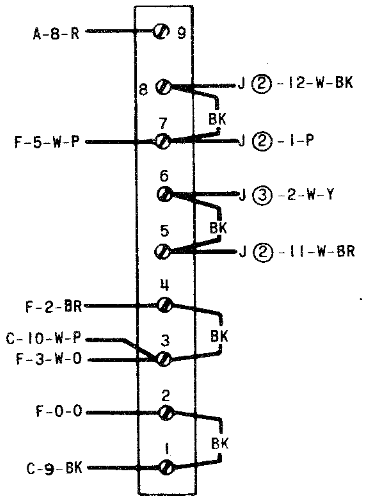
Q
POWER SWITCH



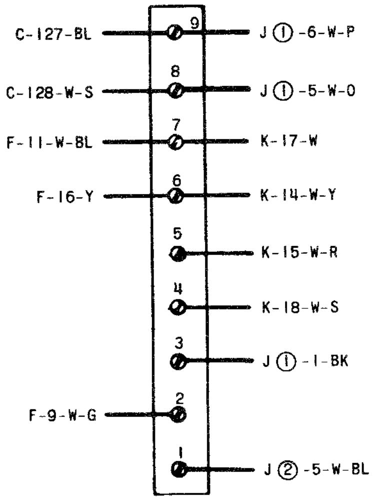
R
TYPING UNIT CONNECTOR (FEMALE)



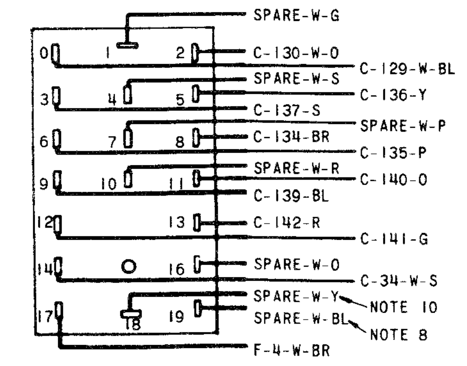
S
SLOW RELEASE RELAY TERMINAL BLOCK



T
SLOW RELEASE TEST KEY TERMINAL BLOCK



U
TRANSMITTER DISTRIBUTOR CONNECTOR (FEMALE)



ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR-GP-OPT.1-AC
LESU35

APPROVALS

D AND R	E OF M
--------	--------

E-NUMBER
PROD. NO. 3660WD
DATE 1-19-59
P.D. FILE NO. G-159.65AA
DRAWN K.F.L. CHKD.
ENGD. J.R.H. APPD.

TELETYPE
CORPORATION

3660WD

RECTIFIER 115 V DC OUTPUT 300 MA.
PRI. 115 V.A.C.
SEC 94-94 V.A.C.
NOTE 20b
SPARE LEADS (TIED TO MAIN CABLE)
TRANS. CONTACTS
TRANS. AUX A CONTACT
F.G.C. SIGNAL GENERATING CIRCUIT
DIST CONTACTS
DIST AUX CONTACT
STOP
A.C. MOTOR, GOVERNED (NOTE 8)
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY) (NOTE 7)
115 VOLTS A.C. (NOTE 8) POWER INPUT
GROUNDED SIDE
CONVENIENCE RECEPT.
POWER SWITCH
6 1/4 AMP SL-BL FUSE
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) NOTE 7
LIGHT SWITCH (IN CABINET)
MAINT. ON
NORMAL ON
OFF
BACKSPACE SWITCH (ON KEYBOARD)
BACKSPACE MAGNET ON PERFORATOR
A.C. MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR SEE ABOVE)
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END OF LINE INDICATOR SWITCH (IN KEYBOARD)
THERMAL CUTOUT
OPERATING WINDING
STARTING WINDING
STARTING CAPACITOR 170 MF
MOTOR START RELAY
PAPER FEED OUT SWITCH (IN KEYBOARD)
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
SELECTOR SWITCH (ON KEYBOARD)
COPY LAMPS
MARGIN IND. LAMP
END-OF-LINE PERF. LAMP
LINE SHUNT RELAY
CLUTCH MAGNETS (IN TRANS. DIST.)
TAPE OUT SWITCH (IN TRANS. DIST.)
TIGHT TAPE SWITCH (IN TRANS. DIST.)
MANUAL SWITCH (IN TRANS. DIST.)
SIGNAL BELL (IN CABINET)
REC. SEND
LOCK BAR SWITCH (IN KEYBOARD)
AUX SWITCH
TIME DELAY CONTACTS (IN KEYBOARD)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
NOTE 3
NOTE 9
NOTE 10b
NOTE 10d
NOTE 14
NOTE 17
NOTE 19
NOTE 20a
NOTE 20b
NOTE 20c
DC−
DC+
AC
REC. SEND
LOCK SW. (IN KEYBOARD)
AUX SWITCH (IN KEYBOARD)
SLOW RELEASE RELAY
SLOW RELEASE RELAY TEST SWITCH
SLOW RELEASE RELAY CONTACTS
LINE TEST KEY
SELECTOR MAGNETS (ON TYPING UNITS)
SPARE LEADS BROUGHT INTO ELECTRICAL SERVICE UNIT CONTAINER AND TAPED.
LINE RELAY UNIT
SIGNAL GENERATOR CONTACTS (IN TRANSMITTER DISTRIBUTOR)
ARC SUPP.
MARKING
SPACING
LOCK BAR SW. (IN KEYBOARD)
SIGNAL GENERATOR CONTACTS (IN KEYBOARD)
ARC SUPPRESSOR
SLOW RELEASE RELAY CONTACTS
SIGNAL LINE BREAK SWITCH (IN KEYBOARD)
LINE SHUNT RELAY CONTACTS
AUX. CONTACTS (IN LINE SHUNT RELAY)
SIGNAL LINE CONTACTS
AUX CONTS.
LINE KEY
HORIZONTAL TABULATOR XD CONTROL CONTACTS (ON TYPING UNIT)
FORM START XD CONTROL CONTACTS (ON TYPING UNIT)
NOTE 12
PERFORATOR LO-TAPE SWITCH
FORM PAPER OUT ALARM CONTACTS (NOTE 13)
REPERFORATOR CONTROL CONTACTS (IN TYPING UNIT STUNT BOX)
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
SIGNAL LINE
C1 C2 C3 FOR CUSTOMERS USE

3661 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	8-4-59	28-11508
B	3-30-60	28-12924
C	3-28-62	69768-10
D	11-27-63	78857

SHEET 1 OF 2

APPROVALS	
D AND P	E OF M
E NUMBER	
PROD. NO. 3661 WD	

SCHEMATIC
WIRING DIAGRAM
MODEL 28
ASR-GP-OPT. II A.C.
WITH FACILITIES
PROVIDED BY
LESU 36
AND ASSOCIATED
UNITS

DATE 1-19-59
P.D. FILE NO. G-159.65AA
DRAWN M.F.L. CHKD.
ENGD. J.R.H. APPD.

TELETYPE
CORPORATION

3661 WD

5

FIG. A LINE SHUNT CIRCUIT

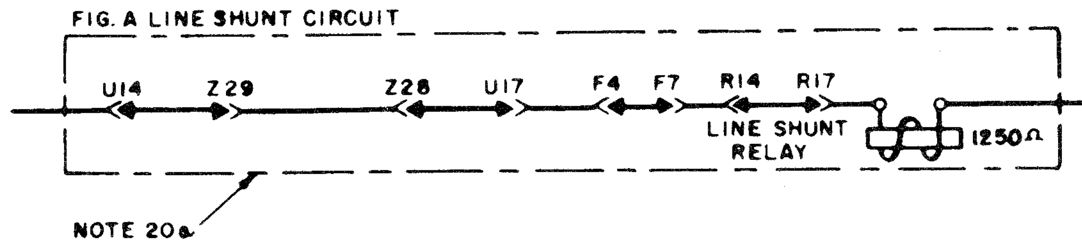
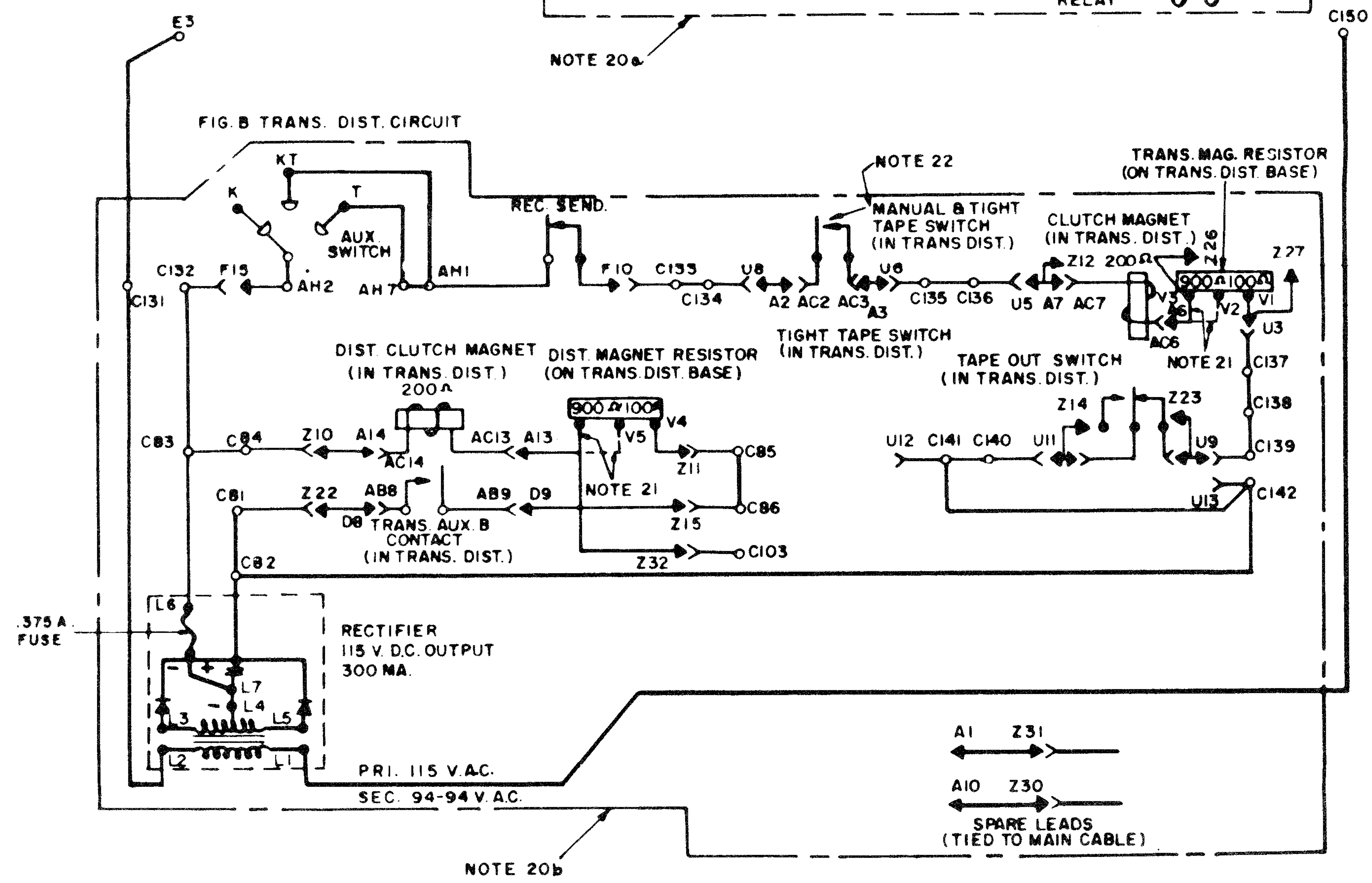
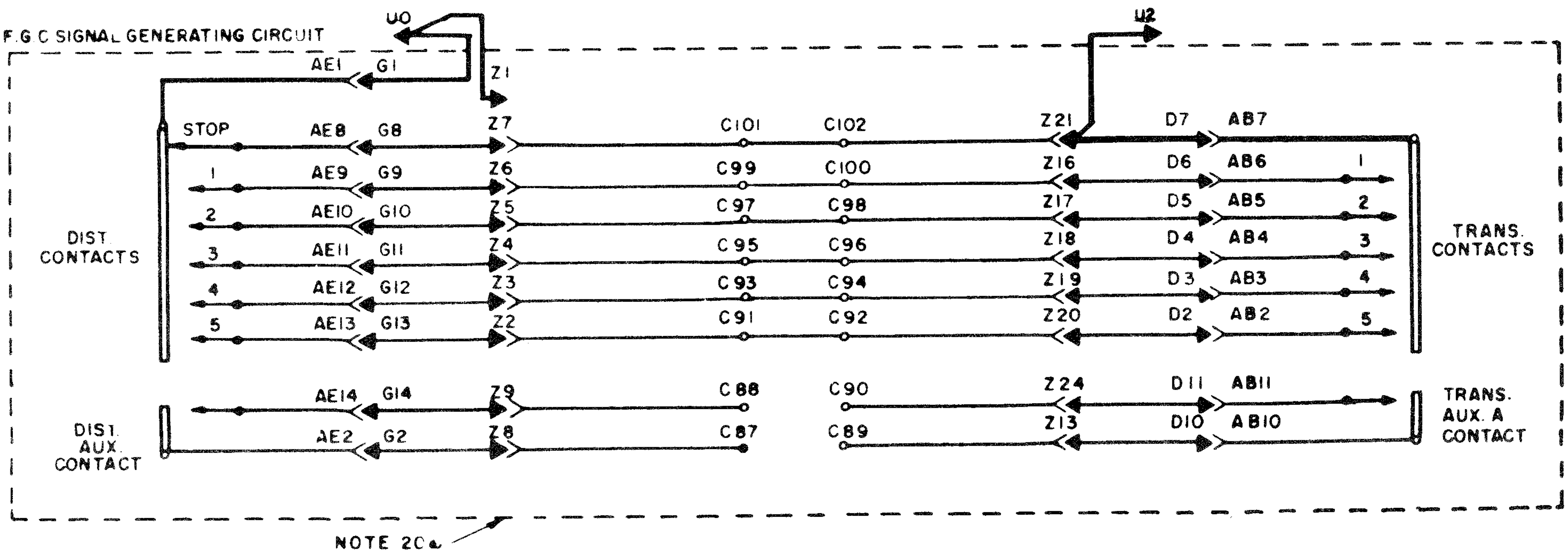
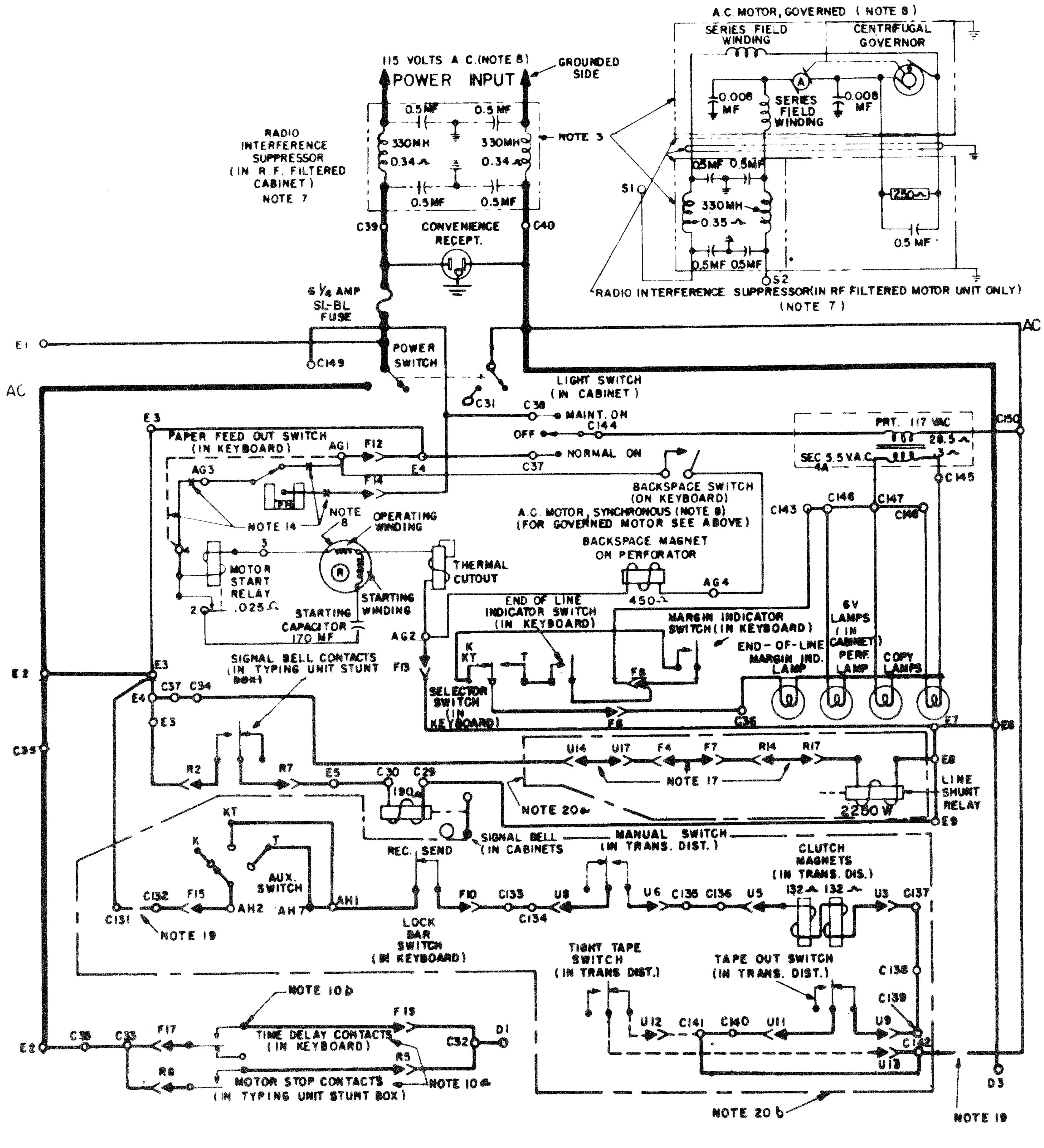


FIG. B TRANS. DIST. CIRCUIT


E3
C150
KT
K
T
AUX SWITCH
AH2
AH7
AH1
REC. SEND.
C132
F15
C131
F10
C133
C134
U8
A2
AC2
AC3
A3
U6
C135
C136
U5
A7
AC7
NOTE 22
MANUAL & TIGHT TAPE SWITCH (IN TRANS DIST.)
TIGHT TAPE SWITCH (IN TRANS. DIST.)
CLUTCH MAGNET (IN TRANS. DIST.)
Z12 200Ω
TRANS. MAG. RESISTOR (ON TRANS. DIST. BASE)
Z26
Z27
900Ω 100Ω
V3
V2
V1
A6
AC6
NOTE 21
U3
C137
C138
C139
C142
TAPE OUT SWITCH (IN TRANS. DIST.)
Z14
Z23
U9
U12
C141
C140
U11
U13
DIST CLUTCH MAGNET (IN TRANS DIST.)
200Ω
DIST. MAGNET RESISTOR (ON TRANS. DIST. BASE)
900Ω 100Ω
V5
V4
C83
C84
Z10
A14
AC14
AC13
A13
Z11
C85
C86
NOTE 21
C81
Z22
AB8
D8
AB9
D9
Z15
TRANS. AUX. B CONTACT (IN TRANS. DIST.)
Z32
C103
C82
L6
.375 A. FUSE
RECTIFIER 115 V. D.C. OUTPUT 300 MA.
L7
L4
L3
L5
L2
L1
PRI. 115 V.A.C.
SEC. 94-94 V.A.C.
NOTE 20b
A1
Z31
A10
Z30
SPARE LEADS (TIED TO MAIN CABLE)

F.G. C SIGNAL GENERATING CIRCUIT




A.C. MOTOR, GOVERNED (NOTE 8)
SERIES FIELD WINDING
CENTRIFUGAL GOVERNOR
A
0.008 MF
SERIES FIELD WINDING
0.008 MF
115 VOLTS A.C. (NOTE 8)
POWER INPUT
GROUNDED SIDE
0.5MF
0.5MF
330MH
0.34Ω
330MH
0.34Ω
NOTE 3
0.5MF
0.5MF
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) NOTE 7
S1
.5MF .5MF
330MH
0.35Ω
.5MF .5MF
S2
250Ω
0.5 MF
C39
CONVENIENCE RECEPT.
C40
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY) (NOTE 7)
6 1/4 AMP SL-BL FUSE
E1
C149
POWER SWITCH
AC
LIGHT SWITCH (IN CABINET)
C31
C38
MAINT. ON
OFF
C144
NORMAL ON
C37
AC
C150
PRI. 117 VAC
28.5Ω
3Ω
SEC. 5.5 V.A.C. 4A
C145
E3
PAPER FEED OUT SWITCH (IN KEYBOARD)
AG1
F12
E4
F14
AG3
NOTE 14
NOTE 8
OPERATING WINDING
BACKSPACE SWITCH (ON KEYBOARD)
A.C. MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR SEE ABOVE)
BACKSPACE MAGNET ON PERFORATOR
AG4
450Ω
C143
C146
C147
C148
MOTOR START RELAY .025Ω
STARTING CAPACITOR 170 MF
STARTING WINDING
THERMAL CUTOUT
AG2
F13
END OF LINE INDICATOR SWITCH (IN KEYBOARD)
K
KT
T
F8
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END-OF-LINE MARGIN IND. LAMP
6V LAMPS (IN CABINET)
PERF. LAMP
COPY LAMPS
SELECTOR SWITCH (IN KEYBOARD)
F6
C36
E7
E6
E2
C35
E3
C37
C34
E4
E3
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
R2
R7
E5
C30
C29
190Ω
U14
U17
F4
F7
R14
R17
NOTE 17
NOTE 20a
E8
LINE SHUNT RELAY
2250 W
E9
SIGNAL BELL (IN CABINETS)
MANUAL SWITCH (IN TRANS. DIST.)
CLUTCH MAGNETS (IN TRANS. DIS.)
132Ω
132Ω
KT
K
T
AUX. SWITCH
C132
F15
AH2
AH7
AH1
REC. SEND
F10
C133
C134
U8
U6
C135
C136
U5
U3
C137
C131
NOTE 19
LOCK BAR SWITCH (IN KEYBOARD)
TIGHT TAPE SWITCH (IN TRANS DIST.)
TAPE OUT SWITCH (IN TRANS. DIST.)
C138
C139
U12
C141
C140
U11
U9
C142
U13
NOTE 10b
TIME DELAY CONTACTS (IN KEYBOARD)
F19
R5
C32
D1
E2
C35
C33
F17
R8
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
NOTE 10a
NOTE 20b
D3
NOTE 19

NO.	NOTES

1. FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:

WD NUMBER	UNITS DIRECTLY OPERABLE WITH LESU
3264 WD	CABINETS - LAAC 200,201
3662 WD	ELECTRICAL SERVICE UNIT LESU
3263 WD	KEYBOARDS - LAK
	MOTOR UNITS - LMU
	PAGE TYPING UNITS - LP
	PAGE TYPING UNITS - LP

2. LEGEND:

- ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU).
- ○ B LINE TEST KEY TERMINAL BLOCK (IN LESU)
- ○ C CABINET TERMINAL BLOCK.
- ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU).
- ○ E POWER TERMINAL BLOCK (IN LESU)
- <◀ F KEYBOARD CONNECTOR.
- ○ J ① TERMINAL STRIP (ON LINE RELAY ASSEM. IN LESU).
- <◀ J ② LINE RELAY CONNECTOR (IN LESU).
- ● J ③ LINE RELAY FILTER (IN LESU).
- ○ K TERMINAL STRIP (ONLINE TEST KEY IN LESU)
- <◀ R TYPING UNIT CONNECTOR.
- ○ S SLOW RELEASE RELAY TERMINAL BOARD (IN LESU).
- ○ T TEST SWITCH TERMINAL BOARD (IN LESU).
- <◀ U TRANSMITTER DISTRIBUTOR CONNECTOR.
- ○ AG MOTOR TERMINAL BLOCK (ON LAK).
- ○ AH AUXILLARY SWITCH TERMINAL BLOCK (ON LAK).

3. DOT DASH -- —— LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.

4. ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.

5\.
- a. RESISTANCE IN OHMS (Ω)
- b. INDUCTANCE VALUES IN MICROHENRIES (MH)
- C. CAPACITANCE VALUES IN MICROFARADS (MF)

6. CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD DASHED (– – –) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—) IN LINE TEST KEY, AND LINE RELAY CIRCUITS

7\.
- a. USE POWER & SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV.-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE.
- b. FOR OTHER INSTALLATIONS, OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECTLY TO TERMINALS SHOWN.

8. USE SYNCHRONOUS MOTOR ON REGULATED 60~(±1%) A.C. POWER ONLY. GOVERNED MOTORS & OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~ UNREGULATED A.C.

9. CIRCUITS SHOWN FOR OPERATION FROM AN EXTERNAL D.C. POWER SUPPLY, LEADS OF WHICH ARE TO BE CONNECTED TO CABINET TERMINALS C21 & C22.

10\.
- a. TO OPERATE MOTOR CONTROL, SET MUST BE EQUIPPED WITH EITHER:
  - 1. TIME DELAY MECH. OR
  - 2. MOTOR STOP CONTACTS.
- b. IF TAPE POSITION IS TO BE USED IN THE ASR SET THE TIME DELAY MECHANISM MUST BE EITHER ELECTRICALLY OR MECHANICALLY DISABLED.

11\.
- a. LINE SHUNT RELAY SHOWN SHUNTING LINE RELAY COIL, TRANS. DIST. SIG. GEN. AND KEYBOARD SIG. GEN

(CONT'D ABOVE)

- b. IF KEYBOARD SHUNTING IS NOT DESIRED MOVE STRAP FROM C10 TO C9.

12. CIRCUIT SHOWS BOTH HORIZONTAL TABULATOR AND FORM START CONTROL USED ON TYPING UNIT. WHEN ONLY ONE CONTROL IS USED, OMIT CONNECTION MARKED (—✕—) AND ADD PROPER DASHED (– – –) CONNECTION IN TYPING UNIT CIRCUITS.

13. FORM PAPER OUT ALARM CONTACTS MAY BE MOUNTED ON EITHER THE TYPING UNIT OR EXTERNAL TO THE CABINET. IN LATTER EVENT, CONNECTIONS ARE MADE DIRECTLY TO TERMINALS C25 AND C26.

14. WHEN PAPER FEED OUT SWITCH IS NOT USED, ADD DASHED (– – –) CONNECTIONS AND OMIT CONNECTIONS MARKED (—✕—) IN MOTOR POWER CIRCUITS.

15. WHEN SIGNAL LINE BREAK SWITCH IS NOT USED IN KEYBOARD ADD (– – –) CONNECTION AT CABINET TERMINAL BLOCK BETWEEN C10 & C11

16. TO PREVENT SLOW RELEASE RELAY FROM ENERGIZING REMOVE CONNECTIONS MARKED (—✕—).

17. IN ALL KEYBOARDS F4 MUST BE CONNECTED TO F7.
IN ALL TRANS. DIST. U14 MUST BE CONNECTED TO U17.
IN ALL TYPING UNITS R14 MUST BE CONNECTED TO R17.

18. SPARE LEADS FROM U18 AND F18 ARE RESERVED FOR POLAR OPERATION OF SIGNAL GENERATOR.

19. WHEN LBXD IS USED IN PLACE OF LXD;

OMIT	ADD
C-142 TO C-150 C-131 TO C-132	

20. WHEN LBXD USED IN PLACE OF LXD USE FOLLOWING FIGURES:

FIG. A -—— - ——- LINE SHUNT CIRCUIT
FIG. B —— - —— TRANS. DIST. CIRCUIT
FIG. C - - - - - - - SIGNAL GENERATING

21. CIRCUIT SHOWN FOR 115 V. D.C. POWER INPUT TO TRANS. DIST. CLUTCH MAGNETS FOR 48 V.D.C. POWER INPUT REMOVE AND ADD CONNECTIONS AS FOLLOWS:

DISCONNECT THE WHITE LEAD FROM V6 AND CONNECT TO V5. DISCONNECT THE PURPLE LEAD FROM V3 AND CONNECT TO V2.

POWER SUPPLY MUST DELIVER 300 MA @ 48 V.D.C. OR 200 MA @ 115 V. D.C.

22. WHEN A SEPARATE TIGHT TAPE SWITCH IS USED IN LBXD THIS SWITCH BECOMES A MANUAL ON-OFF SWITCH ONLY.

3661 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
5	11-27-63	78857

SHEET 2 OF 2

SCHEMATIC
WIRING DIAGRAM
MODEL 28
ASR-GP-OPT. II A.C.
WITH FACILITIES
PROVIDED BY
LESU 36
AND ASSOCIATED
UNITS

TELETYPE
CORPORATION

3661 WD

2792-B

[redacted]

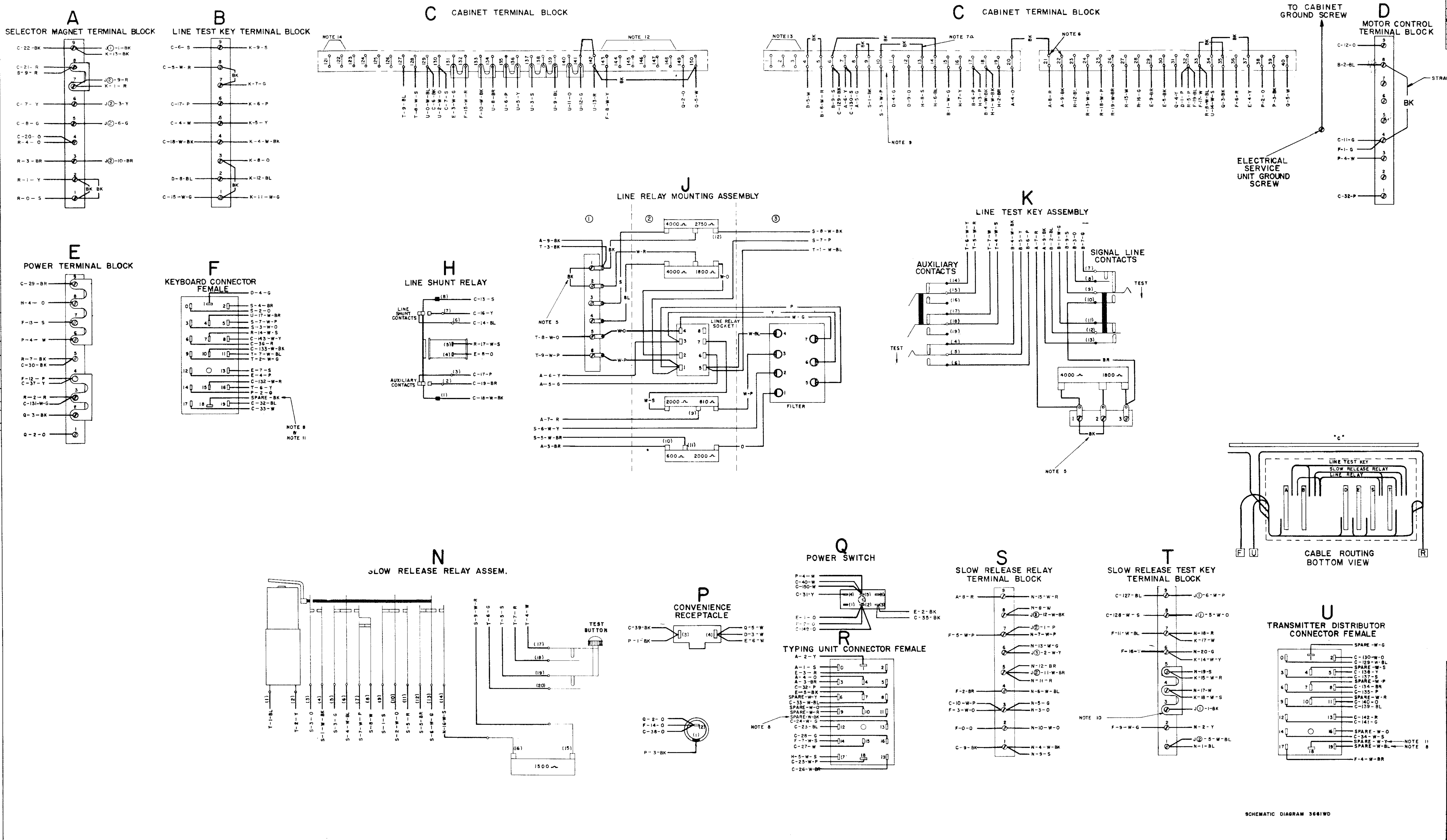
2 1/4 X 10 3/4

R27

	WIRING LEGEND: A – 1 – W–BL A — DISTANT TERMINATING AREA 1 — DISTANT TERMINAL DESIGNATION W–BL — WIRE COLOR CODE
2.	COLOR CODE BK — BLACK BR — BROWN R — RED O — ORANGE Y — YELLOW G — GREEN BL — BLUE P — PURPLE W — WHITE S — SLATE W-BK — WHITE – BLACK W-BR — WHITE – BROWN W-R — WHITE – RED W-O — WHITE – ORANGE W Y — WHITE – YELLOW W G — WHITE – GREEN W BL — WHITE – BLUE W P — WHITE – PURPLE W S — WHITE – SLATE
3.	UNIT WIRED FOR 115 VOLTS. 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
4.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION REMOVE AND ADD CONNECTIONS AS TABULATED BELOW.
6.	CIRCUIT SHOWN FOR OPERATION FROM AN EXTERNAL D.C. POWER SUPPLY, LEADS OF WHICH ARE TO BE CONNECTED TO CABINET TERMINALS C21 & C22. POSITIVE DC SHOULD BE CONNECTED TO C21.
7.	LINE SHUNT RELAY SHOWN SHUNTING LINE RELAY COIL AND KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATOR. a. IF KEYBOARD SHUNTING IS NOT DESIRED, OR WHEN SIGNAL LINE BREAK SWITCH IS PRESENT, REMOVE THE BLACK STRAP CONNECTED BETWEEN TERMINALS C-10 AND C-13 AND CONNECT TERMINALS C-9 AND C-13.
8.	THE SPARE LEADS FROM THE KEYBOARD AND TRANSMITTER DISTRIBUTOR UNITS CONNECTORS ARE TERMINATED IN THE RIGHT END OF THE ELECTRICAL SERVICE UNIT. THE SPARE LEADS FROM THE TYPING UNIT CONN. ARE TERMINATED IN THE LEFT END OF THE ELECTRICAL SERVICE UNIT.
9.	ADD STRAP BETWEEN C-10 & C-11 IF SIGNAL LINE BREAK SWITCH IS NOT USED.
10.	TO PREVENT SLOW RELEASE RELAY FROM OPERATING, REMOVE STRAP CONNECTING T-3, T-4 & T-5.
11.	SPARE LEADS FROM F-18 AND U18 ARE RESERVED FOR POLAR OPERATION OF KEYBOARD AND TRANSMITTER DISTRIBUTOR SIGNAL GENERATORS.
12	TERMINALS C143 – C148 RESERVED FOR CABINET LAMP OPERATION.
13	TERMINALS C1 – C3 RESERVED FOR CUSTOMERS USE.
14	TERMINALS C-121 — C-122 RESERVED FOR PERFORATOR LO-TAPE SWITCH.
15	CONTACTS SHOWN IN UNOPERATED OR DEENERGIZED POSITION.

Note 5 table:

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTIONS ADDED
.020 AMP	K1-K2, J①1-J①2,	J①3-J①4,



3662WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	8-4-59	28-11508
B	3-20-61	69286
C	3-28-62	69768-10

APPROVALS

D AND	E OF M

E-NUMBER

PROD. NO. 3660WD

ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
ASR-GP-OPT. II A.C.
LESU 36

DATE: 1-19-59
P.D. FILE NO. G-159.65AA
DRAWN. K.F.L. CHKD.
ENGD. J.R.H. APPD.

TELETYPE
CORPORATION

3662WD

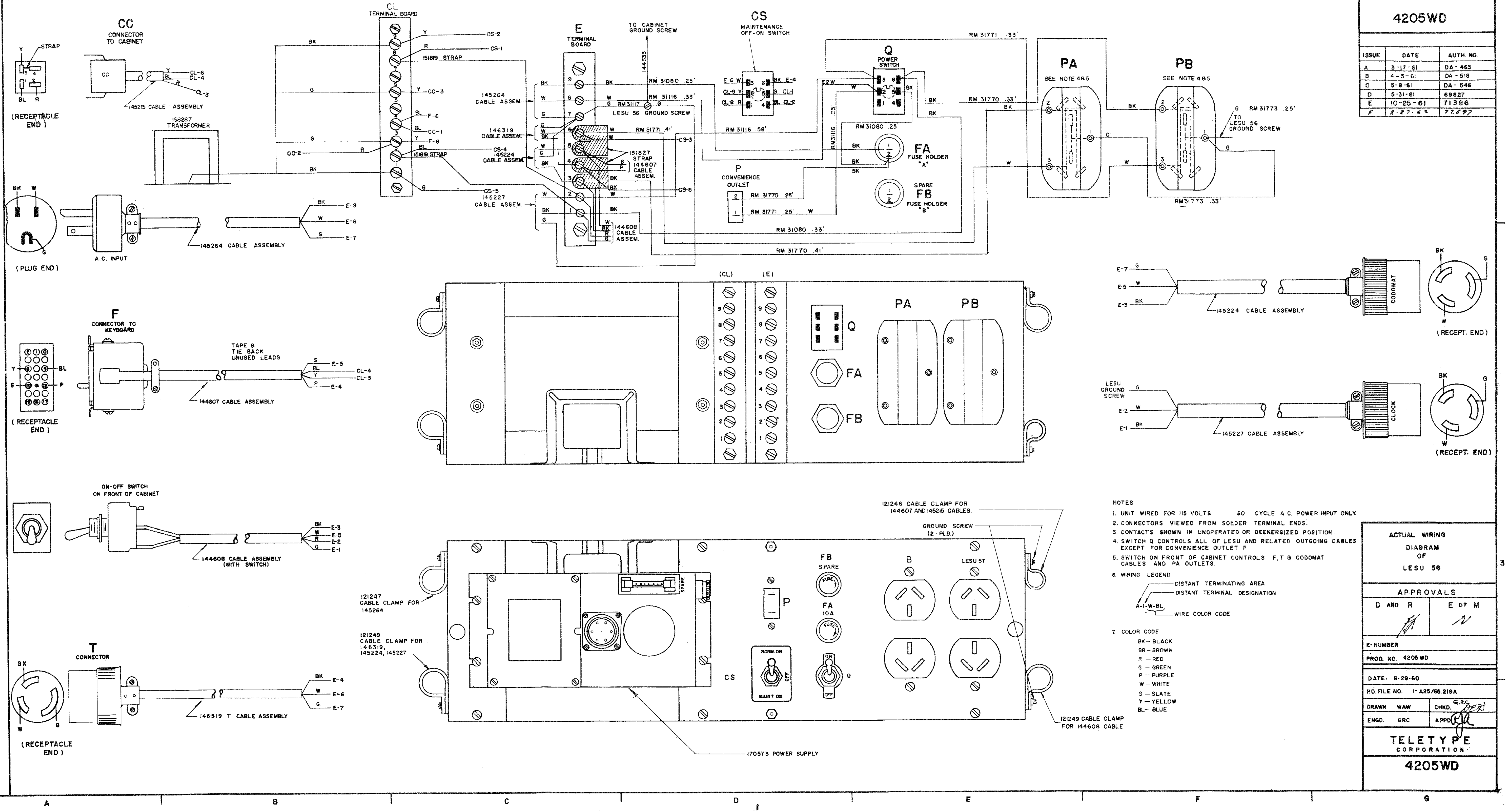
4205WD

ISSUE	DATE	AUTH. NO.
A	3-17-61	DA-463
B	4-5-61	DA-518
C	5-8-61	DA-546
D	5-31-61	69827
E	10-25-61	71386
F	2-27-62	72597

595-E

10 3/4 X 20

R27½



NOTES

1. UNIT WIRED FOR 115 VOLTS. 60 CYCLE A.C. POWER INPUT ONLY.
2. CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
3. CONTACTS SHOWN IN UNOPERATED OR DEENERGIZED POSITION.
4. SWITCH Q CONTROLS ALL OF LESU AND RELATED OUTGOING CABLES EXCEPT FOR CONVENIENCE OUTLET P
5. SWITCH ON FRONT OF CABINET CONTROLS F, T & CODOMAT CABLES AND PA OUTLETS.
6. WIRING LEGEND

A-1-W-BL
- A — DISTANT TERMINATING AREA
- 1 — DISTANT TERMINAL DESIGNATION
- W-BL — WIRE COLOR CODE

7. COLOR CODE

BK — BLACK
BR — BROWN
R — RED
G — GREEN
P — PURPLE
W — WHITE
S — SLATE
Y — YELLOW
BL — BLUE

ACTUAL WIRING
DIAGRAM
OF
LESU 56

APPROVALS

D AND R	E OF M

E-NUMBER

PROD. NO. 4205 WD

DATE: 8-29-60

P.O. FILE NO. 1-A25/66.219A

DRAWN WAW	CHKD. G.R.C.
ENGD. GRC	APPD

TELETYPE
CORPORATION

4205WD

4206

2049-1

10/17/60

	NOTES
1.	WIRING LEGEND: A 1 W BL A — DISTANT TERMINATING AREA. 1 — DISTANT TEMINAL DESIGNATION. W BL — WIRE COLOR CODE.
2	COLOR CODE BK — BLACK BR — BROWN R — RED O — ORANGE Y — YELLOW G — GREEN BL — BLUE P — PURPLE W — WHITE S — SLATE
3	WHEN LESU IS USED IN LAC 215.
4	WHEN LESU IS USED IN LBAC 227.
5.	* DENOTES 18 AWG.
6.	TAPE & TIE BACK SPARE LEADS
7.	SWITCH Q MUST BE IN "OFF" POSITION WHEN LESU IS INSTALLED IN LBAC 227.
8.	CABLES USED (table below)
9.	AUDIBLE ALARM TO BE FURNISHED BY CUSTOMER
10.	TO CONNECT AUXILIARY PRINTER OR REPERFORATOR WITH LINE RELAY: A. REMOVE STRAP CONNECTING AN-1 TO AN-2. B. CONNECT + LINE SIDE OF LINE RELAY COIL TO AN-1 OR C-31. C. CONNECT − LINE SIDE OF LINE RELAY COIL TO AN-2 OR C-32. D. TO RECEIVE ON AUXILIARY UNIT ONLY AFTER CONFIRMATION HAS BEEN RECEIVED BY THE RECEIVING SET, CONNECT DC-4 AND DC-5 OR C-33 AND C-34 ACROSS THE AUXILIARY LINE RELAY CONTACTS. E. AUXILIARY LOOP BATTERY, BIAS WINDING, MOUNTING FACILITIES, ETC. MUST BE PROVIDED BY THE CUSTOMER AND ARE NOT SHOWN.
11.	CABLES USED 145013, 145210
12	ASSOCIATED SCHEMATIC 4242WD
13	RELAY CORE PLATES TO BE STAMPED WITH CIRCUIT DESIGNATIONS AS INDICATED ON BLOCK DIAGRAM USING 1/8" BLACK GOTHIC LETTERS.

Note 8 — CABLES USED

CABLE ASSEMBLY	W/LAC 215	W/LBAC 227
F	145262	145064
R	145263	145062
S	145264	145063

4206 WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
A	1-25-61	DA302
B	2-21-61	DA423
C	3-7-61	DA 465
D	4-11-61	DA-530
E	5-5-61	DA-582
F	5-30-61	70336
G	6-30-61	70336
H	2-13-62	71860-1

ACTUAL
WIRING DIAGRAM
FOR
LESU 58

APPROVALS	
D AND R	E OF M
E-NUMBER	
PROD. NO. 4206 WD	
DATE: 10-17-60	
RD. FILE NO. HA25 66.219A	
DRAWN R.E.L.	CHKD.
ENGD. P.P.	APPD.

TELETYPE
CORPORATION

4206 WD

10¾ x 26

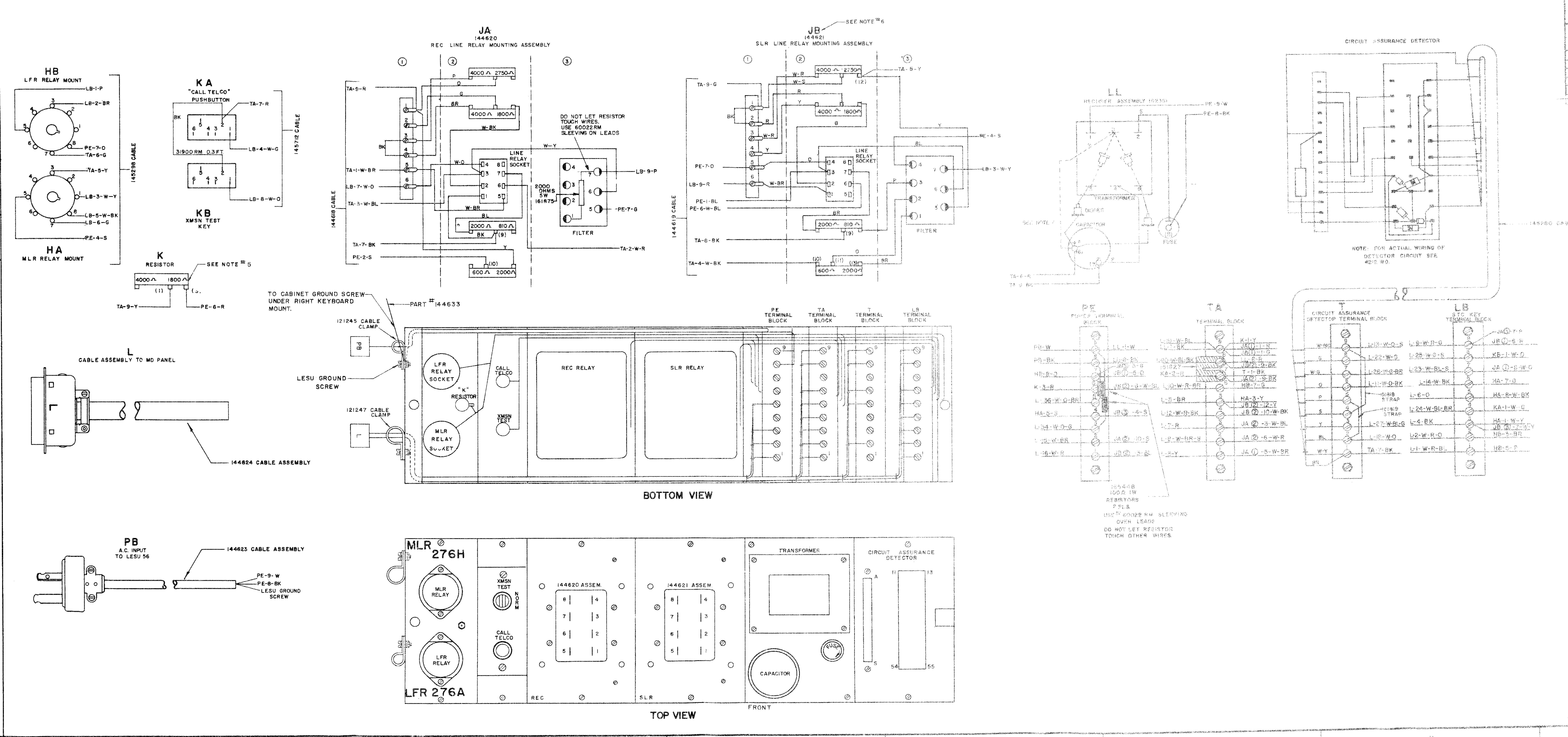
NOTES

1. WIRING LEGEND:
   A-1-W-BL
   - A: DISTANT TERMINATING AREA.
   - 1: DISTANT TERMINAL DESIGNATION
   - W-BL: WIRE COLOR CODE

2.

BK—BLACK	BR—BROWN
R—RED	O—ORANGE
Y—YELLOW	G—GREEN
BL—BLUE	P—PURPLE
W—WHITE	S—SLATE

3. UNIT WIRED FOR 115 VOLTS. 60 CYCLE AC. POWER INPUT ONLY.
4. PLUGS VIEWED FROM SOLDER TERMINAL END.
5. MOUNT "K" RESISTOR WITH 1800 OHM TERMINALS NEAR MOUNTING PLATE. USE 60026 SLEEVING ON TERMINALS, 3/4 IN. LONG.
6. CONNECT CABLE 145280 FIRST AND RECTIFIER ASSEMBLY NEXT.
7. EARLIER 162361 ASSEMBLIES WERE WIRED WITH DIODES CONNECTED TO "D" POST ON TRANSFORMER AND WITH RED WIRE FROM "D" POST ON CAPACITOR (SHOWN DOTTED). LATER MODELS WERE WIRED AS SHOWN WITH SOLID LINES.



4211 WD

ISSUE	DATE	AUTH. NO.
A	1-31-61	DA388
B	2-21-61	DA-422
C	6-5-61	69734
D	6-6-61	69916
E	4-2-63	76621
G	1-28-69	96295

ACTUAL
WIRING DIAGRAM
OF
LESU 67

APPROVALS

D AND R	E & M

E-NO. 15E55-2
PROD. NO. 4211 WD
DATE: 8-16-60
PD/FILE NO. 1-A25/65.219A
DRAWN: WAW
CHKD: GRC
ENGD: SC
APPD:

TELETYPE
CORPORATION

4211 WD

4219

NOTES

1.	WIRING LEGEND. A-1 W-BL DISTANT TERMINATING AREA. DISTANT TERMINAL DESIGNATION. WIRE COLOR CODE.
2	COLOR CODE BK — BLACK BR — BROWN R — RED O — ORANGE Y — YELLOW G — GREEN BL — BLUE P — PURPLE W — WHITE S — SLATE
3	WHEN LESU IS USED IN LAC 215.
4	WHEN LESU IS USED IN LBAC 227.
5.	* DENOTES 18 AWG.
6.	TAPE & TIE BACK SPARE LEADS
7.	SWITCH Q MUST BE IN "OFF" POSITION WHEN LESU IS INSTALLED IN LBAC227.
8.	CABLES USED (table below)
9.	AUDIBLE ALARM TO BE FURNISHED BY CUSTOMER
10.	TO CONNECT AUXILIARY PRINTER OR REPERFORATOR WITH LINE RELAY: A. REMOVE STRAP CONNECTING AN-1 TO AN-2. B. CONNECT + LINE SIDE OF LINE RELAY COIL TO AN1 OR C-31. C. CONNECT − LINE SIDE OF LINE RELAY COIL TO AN-2 OR C-32. D. TO RECEIVE ON AUXILIARY UNIT ONLY AFTER CONFIRMATION HAS BEEN RECEIVED BY THE RECEIVING SET, CONNECT DC-4 AND DC-5 OR C-33 AND C-34 ACROSS THE AUXILIARY LINE RELAY CONTACTS. E. AUXILIARY LOOP BATTERY, BIAS WINDING, MOUNTING FACILITIES, ETC. MUST BE PROVIDED BY THE CUSTOMER AND ARE NOT SHOWN.
11.	CABLES USED: 145014 145210
12.	ASSOCIATED SCHEMATIC WD 4243.
13.	RELAY CORE PLATES TO BE STAMPED WITH CIRCUIT DESIGNATION AS INDICATED ON BLOCK DIAGRAM USING $\frac{1}{8}$ BLACK GOTHIC LETTERS.

CABLES USED (Note 8)

CABLE ASSEMBLY	W/LAC 215	W/LBAC227
F	145282	145064
R	145283	145062
S	145284	145063

7583-1

10 1/4 x 33

R-28

4219 WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
A	1-31-61	DA-301
B	2-21-61	DA-[illegible]
C	2-21-61	DA-430
D	3-6-61	DA-468
E	5-5-61	DA-552
F	6-23-61	70250
G	6-30-61	70336
H	2-13-62	71860-1

ACTUAL
WIRING DIAGRAM
FOR
LESU59

APPROVALS	
D AND R	E OF M
E-NUMBER	
PROD. NO. 4219 WD	
DATE: 10-17-60	
P.D. FILE NO. FA28 68.219A	
DRAWN R.E.L.	CHKD.
ENGD. P.P.	APPD.

TELETYPE
CORPORATION

4219 WD

AC MOTOR, SYNCHRONOUS (FOR GOVERNED MOTOR SEE NOTE ABOVE)
NOTE OPERATING WINDING
THERMAL CUTOUT
STARTING WINDING
STARTING CAPACITOR 170 MF
MOTOR START RELAY .025 Ω
SIGNAL BELL CONTACTS F13 (IN TYPING UNIT STUNT BOX)
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END OF LINE INDICATOR SWITCH (IN KEYBOARD)
END-OF-LINE MARGIN IND. LAMP
6V LAMPS (IN CAB.)
COPY LAMPS
SELECTOR SWITCH (IN KEYBOARD)
SIGNAL BELL (IN CABINETS)
MANUAL & TIGHT TAPE SWITCH (IN TRANS. DIST.)
TRANS. CLUTCH MAGNETS (IN TRANS. DIST.)
TAPE OUT SWITCH (IN TRANS. DIST.)
REC. SEND
AUX. SWITCH
LOCK BAR SWITCH (IN KEYBOARD)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
PRI. 115 V.A.C.
SEC. 85-95 V.A.C.
RECTIFIER 300 MA. 115 V.D.C. OUTPUT
FUSE 0.8A
DC−
DC+
UC "C" CONTACT (IN STUNT BOX)
MOTOR CONTROL MAINTAIN CONTACT (IN ANSWER BACK)
MOTOR CONTROL RELAY
HERE IS KEYLEVER CONTACT
SLOW RELEASE RELAY CONTACT
ANSWER BACK CONTROL RELAY
KYBD UNIVERSAL CONTACT
SLOW RELEASE RELAY
FORM FEED OUT SOLENOID
GEAR SHIFT MAGNET
ANSWER BACK MAGNET (ON TRANSMITTER BASE)
LATCHING CONTACT
DISTRIBUTOR BLOCK (IN ANSWER BACK)
STOP
ANSWER BACK CONTROL RELAY CONTACTS
60 MFD
NOTE 10
NOTE 6
NOTE 3
SPACING
MARKING
LINE RELAY UNIT
SELECTOR MAGNETS (ON TYPING UNITS)
SPARE LEADS BROUGHT INTO ELECTRICAL SERVICE UNIT CONTAINER AND TAPED
LOCK BAR SW. (IN KEYBOARD)
REC. SEND
SIGNAL GENERATOR CONTACTS
ARC SUPPRESSOR (IN KEYBOARD)
SIGNAL LINE BREAK SWITCH (IN KEYBOARD)
ARC SUPPRESSOR CONTACTS (IN TRANSMITTER DISTRIBUTOR)
SIGNAL GENERATOR CONTACTS
STUNT BOX CONTACTS
L.F. BLANK LTRS.
BLANK N
FIGS C
BLANK Z
FORM START XD CONTROL CONTACTS (ON TYPING UNIT)
RADIO INTERFERENCE SUPPRESSOR (IN R F FIL LERED CABINET) (NOTE 7)
330 MH
0.34 Ω
0.1 MF
SIGNAL LINE
UNIVERSAL CONTACTS (ON TYPING UNIT)
SLOW RELEASE RELAY CONTACT
LOW PAPER CONTACT (ON CABINET)
PAPER OUT CONTACT (ON CABINET)
NOTE 3

FOR ACTUAL WIRING SEE 4336 WD

SEE SHEET 2 FOR NOTES

SHEET 1 OF 2

4335 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
A	1-31-62	72322
B	11-4-63	[illegible]

APPROVALS	
D AND R	E OF M

SCHEMATIC
WIRING DIAGRAM
MODEL 28 ASR

WITH FACILITIES
PROVIDED BY
ELECT SERVICE UNIT
LESU 66
AND ASSOCIATED
UNITS

E NUMBER
PROD. NO. 4335 WD
DATE: 2-10-61
P.D. FILE NO. 22-A65.219A
DRAWN J.W.P. CHKD.
ENGD. G.E.W. APPD.

TELETYPE
CORPORATION

4335 WD

FOR ACTUAL WIRING SEE 4336 WD

AC MOTOR, SYNCHRONOUS (FOR GOVERNED MOTOR SEE NOTE ABOVE)
MOTOR START RELAY .025 A
STARTING CAPACITOR 170 MF
THERMAL CUTOUT
OPERATING WINDING
STARTING WINDING
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
SELECTOR SWITCH (IN KEYBOARD)
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END OF LINE INDICATOR SWITCH (IN KEYBOARD)
6V LAMPS (IN CAB.) COPY LAMPS PERF LAMP END-OF-LINE MARGIN IND LAMP
SIGNAL BELL (IN CABINET)
MANUAL & TIGHT TAPE SWITCH (IN TRANS. DIST.)
TRANS CLUTCH MAGNETS (IN TRANS. DIST.)
TAPE OUT SWITCH (IN TRANS DIST.)
REC SEND
LOCK BAR SWITCH (IN KEYBOARD)
AUX. SWITCH
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
PRI. 115 V.A.C.
SEC. 85-95 V.A.C.
RECTIFIER 300 MA. 115 V.D.C. OUTPUT
FUSE 0.8A
DC−
DC+
UC "G" CONTACT (IN STUNT BOX)
MOTOR CONTROL MAINTAIN CONTACT (IN ANSWER BACK)
MOTOR CONTROL RELAY
HERE IS KEYLEVER CONTACT
SLOW RELEASE RELAY CONTACT
ANSWER BACK CONTROL RELAY
KYBD UNIVERSAL CONTACT
SLOW RELEASE RELAY
FORM FEED OUT SOLENOID
GEAR SHIFT MAGNET
ANSWER BACK MAGNET (ON TRANSMITTER BASE)
LATCHING CONTACT
DISTRIBUTOR BLOCK (IN ANSWER BACK)
ANSWER BACK CONTROL RELAY CONTACTS
60 MFD
NOTE 10
NOTE 6
NOTE 3
LINE RELAY UNIT
SPACING
MARKING
SELECTOR MAGNETS (ON TYPING UNITS)
SPARE LEADS BROUGHT INTO ELECTRICAL SERVICE UNIT CONTAINER AND TAPED
SIGNAL GENERATOR ARC SUPPRESSOR CONTACTS (IN KEYBOARD)
SIGNAL GENERATOR ARC SUPPRESSOR (IN TRANSMITTER DISTRIBUTOR)
LOCK BAR SW. (IN KEYBOARD)
SIGNAL LINE BREAK SWITCH (IN KEYBOARD)
STUNT BOX CONTACTS
L.F. BLANK LTRS.
BLANK N
FIGS
BLANK Z
FORM START XD CONTROL CONTACTS (ON TYPING UNIT)
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED CABINET) (NOTE 7)
SIGNAL LINE
UNIVERSAL CONTACTS (ON TYPING UNIT)
SLOW RELEASE RELAY CONTACT
LOW PAPER CONTACT (ON CABINET)
PAPER OUT CONTACT (ON CABINET)

4335 WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
A	1-31-62	72322
B	11-4-63	78157

SEE SHEET 2
FOR NOTES

SHEET 1 OF 2

APPROVALS
D AND R E OF M

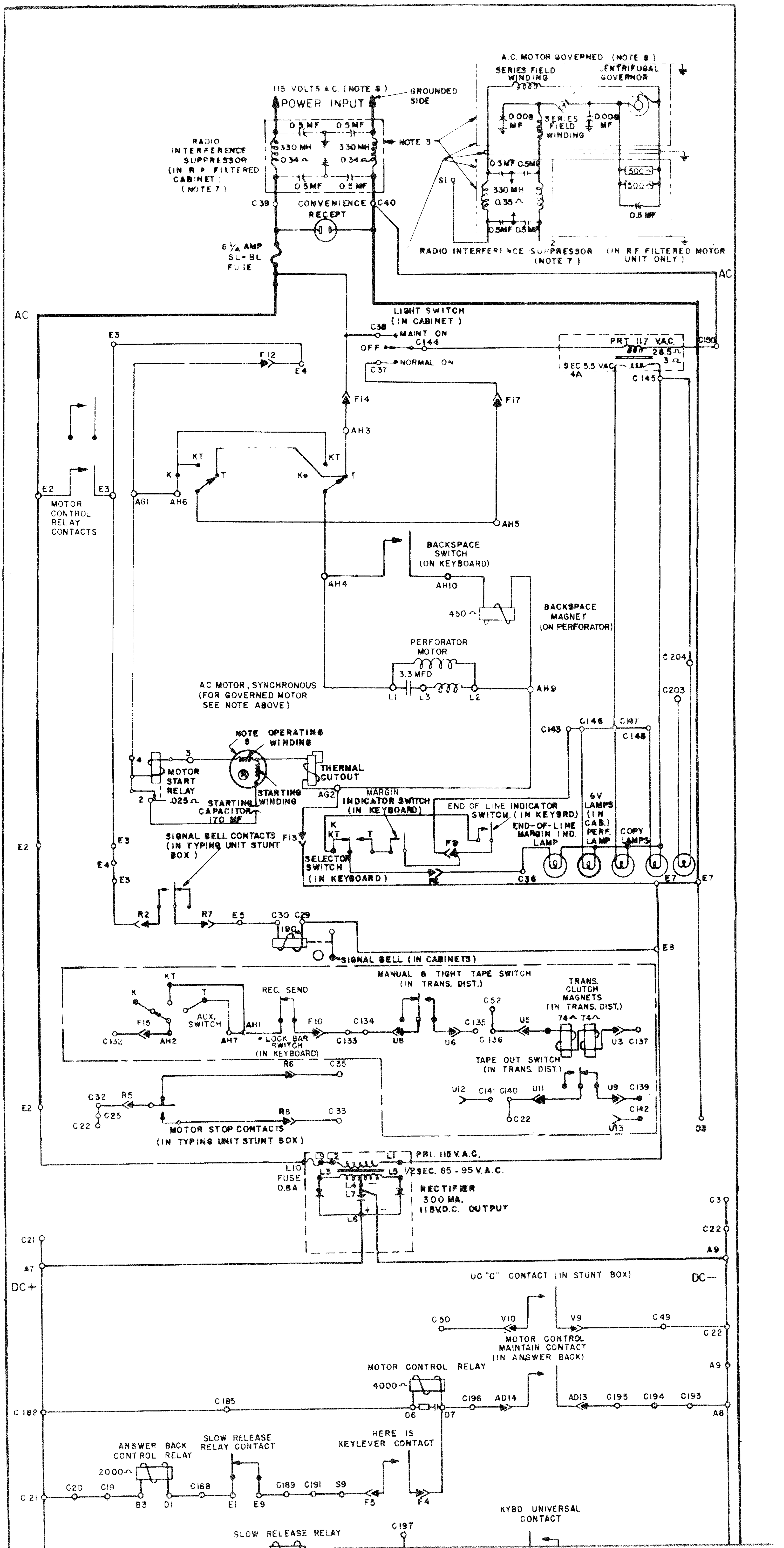
SCHEMATIC
WIRING DIAGRAM
MODEL 28 ASR

WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 66
AND ASSOCIATED
UNITS

E NUMBER
PROD. NO. 4335 WD
DATE: 2-10-61
P.D. FILE NO. 22-A65.219A
DRAWN J.W.P. CHKD.
ENGD. G.E.W. APPD.

TELETYPE
CORPORATION

4335 WD


A.C. MOTOR GOVERNED (NOTE 8)
SERIES FIELD WINDING
CENTRIFUGAL GOVERNOR
0.008 MF
SERIES FIELD WINDING
0.008 MF
115 VOLTS A.C. (NOTE 8)
POWER INPUT
GROUNDED SIDE
NOTE 3
0.5 MF
330 MH
0.34 Ω
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
C39
C40
CONVENIENCE RECEPT.
S1
0.5MF
330 MH
0.35 Ω
500 Ω
0.5 MF
RADIO INTERFERENCE SUPPRESSOR (NOTE 7)
(IN R.F. FILTERED MOTOR UNIT ONLY)
6 1/4 AMP SL-BL FUSE
AC
LIGHT SWITCH (IN CABINET)
C38
MAINT ON
OFF
C144
NORMAL ON
C37
PRT 117 VAC
28.5 Ω
3 Ω
SEC 5.5 VAC 4A
C150
C145
E3
F12
E4
F14
F17
AH3
KT
K
T
Ko
E2
MOTOR CONTROL RELAY CONTACTS
AG1
AH6
AH5
BACKSPACE SWITCH (ON KEYBOARD)
AH4
AH10
450 Ω
BACKSPACE MAGNET (ON PERFORATOR)
PERFORATOR MOTOR
3.3 MFD
L1
L3
L2
AH9
C204
C203
AC MOTOR, SYNCHRONOUS (FOR GOVERNED MOTOR SEE NOTE ABOVE)
C143
C146
C147
C148
NOTE 8
OPERATING WINDING
THERMAL CUTOUT
MOTOR START RELAY
.025 Ω
STARTING WINDING
STARTING CAPACITOR 170 MF
AG2
MARGIN INDICATOR SWITCH (IN KEYBOARD)
END OF LINE INDICATOR SWITCH (IN KEYBRD)
END-OF-LINE MARGIN IND. LAMP
6V LAMPS (IN CAB.)
PERF. LAMP
COPY LAMPS
F13
F9
F6
SELECTOR SWITCH (IN KEYBOARD)
C36
E7
SIGNAL BELL CONTACTS (IN TYPING UNIT STUNT BOX)
R2
R7
E5
C30
C29
190 Ω
E8
SIGNAL BELL (IN CABINETS)
MANUAL & TIGHT TAPE SWITCH (IN TRANS. DIST.)
REC. SEND
AUX. SWITCH
F15
C132
AH2
AH7
AH1
F10
C134
C133
U8
U6
C135
C136
C52
U5
TRANS. CLUTCH MAGNETS (IN TRANS. DIST.)
74 Ω
U3
C137
* LOCK BAR SWITCH (IN KEYBOARD)
R6
C35
TAPE OUT SWITCH (IN TRANS. DIST.)
U12
C141
C140
U11
U9
C139
C142
U13
C22
C32
R5
C25
R8
C33
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
D3
L9
L2
L1
PRI. 115 V.A.C.
L10
FUSE 0.8A
L3
L5
1/2 SEC. 85 - 95 V.A.C.
L4
L7
L6
RECTIFIER 300 MA. 115V.D.C. OUTPUT
C3
C21
A7
DC+
A9
DC−
UC "C" CONTACT (IN STUNT BOX)
C50
V10
V9
C49
MOTOR CONTROL MAINTAIN CONTACT (IN ANSWER BACK)
MOTOR CONTROL RELAY
4000 Ω
C182
C185
D6
D7
C196
AD14
AD13
C195
C194
C193
A8
ANSWER BACK CONTROL RELAY
SLOW RELEASE RELAY CONTACT
HERE IS KEYLEVER CONTACT
2000 Ω
C20
C19
B3
D1
C188
E1
E9
C189
C191
S9
F5
F4
KYBD UNIVERSAL CONTACT
C197
SLOW RELEASE RELAY

5730-e

54 X 10 3/4

R4

NOTES

1 FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:

WD NUMBER	UNITS DIRECTLY OPERABLE WITH LESU
4337 WD	CABINETS – LAAC 233
4336 WD	ELECTRICAL SERVICE UNIT LESU 66
4338 WD	KEYBOARDS – LAK 27
2900 WD	MOTOR UNITS – LMU 3,4,6
4340 WD	PAGE TYPING UNITS – LP 95
3573 WD	TRANSMITTER DISTRIBUTOR – LXD 5
4359 WD	TRANSMITTER DISTRIBUTOR – ~~BASED LBXD~~

2 LEGEND
- ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU)
- ○ B TERMINAL BLOCK (IN LESU)
- ○ C CABINET TERMINAL BLOCK
- ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU)
- ○ E POWER TERMINAL BLOCK (IN LESU)
- ◀ F KEYBOARD CONNECTOR
- ○ J ① TERMINAL STRIP (ON LINE RELAY ASSEM. IN LESU)
- ◀ J ② LINE RELAY CONNECTOR (IN LESU)
- ● J ③ LINE RELAY FILTER (IN LESU)
- ○ L TERMINAL BLOCK (ON LPE)
- ◀ R TYPING UNIT CONNECTOR
- ○ S TERMINAL BLOCK (IN LESU)
- ○ T TERMINAL BLOCK (IN LESU)
- ◀ U TRANSMITTER DISTRIBUTOR CONNECTOR
- ○ AG MOTOR TERMINAL BLOCK (ON LAK)
- ○ AH AUXILIARY SWITCH TERMINAL BLOCK (ON LAK)
- ◀ Z TRANSMITTER DISTRIBUTOR CONNECTOR (LBXD)
- ◀ AD ANSWER BACK CONNECTOR (ON LCXB)
- ◀ V STUNT BOX CONNECTOR

3 DOT DASH (– - —) LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.

4 ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.

5
RESISTANCE IN OHMS (Ω)
INDUCTANCE VALUES IN MICROHENRIES (MH)
CAPACITANCE VALUES IN MICROFARADS (MF)

6 FOR .060 AMP OPERATION ADD STRAP BETWEEN C 201 AND C 202

7 USE POWER & SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV.-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE.

FOR OTHER INSTALLATIONS, OMIT SUPPRESSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECTLY TO TERMINALS SHOWN.

8 USE SYNCHRONOUS MOTOR ON REGULATED 60~ (±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60 ~ UNREGULATED A.C.

9 WHEN SIGNAL LINE BREAK SWITCH IS NOT USED IN KEYBOARD ADD DASHED (- - - -) CONNECTION AT CABINET TERMINAL BLOCK BETWEEN C10 AND C11.

10. CONNECT [illegible] TO C123 TO BLIND PAGE PRINTER SELECTOR MAGNETS.

NOTES

4335 WD

REVISIONS

ISSUE	DATE	AUTH NO.
B	11-23-63	78858

SHEET 2 OF 2

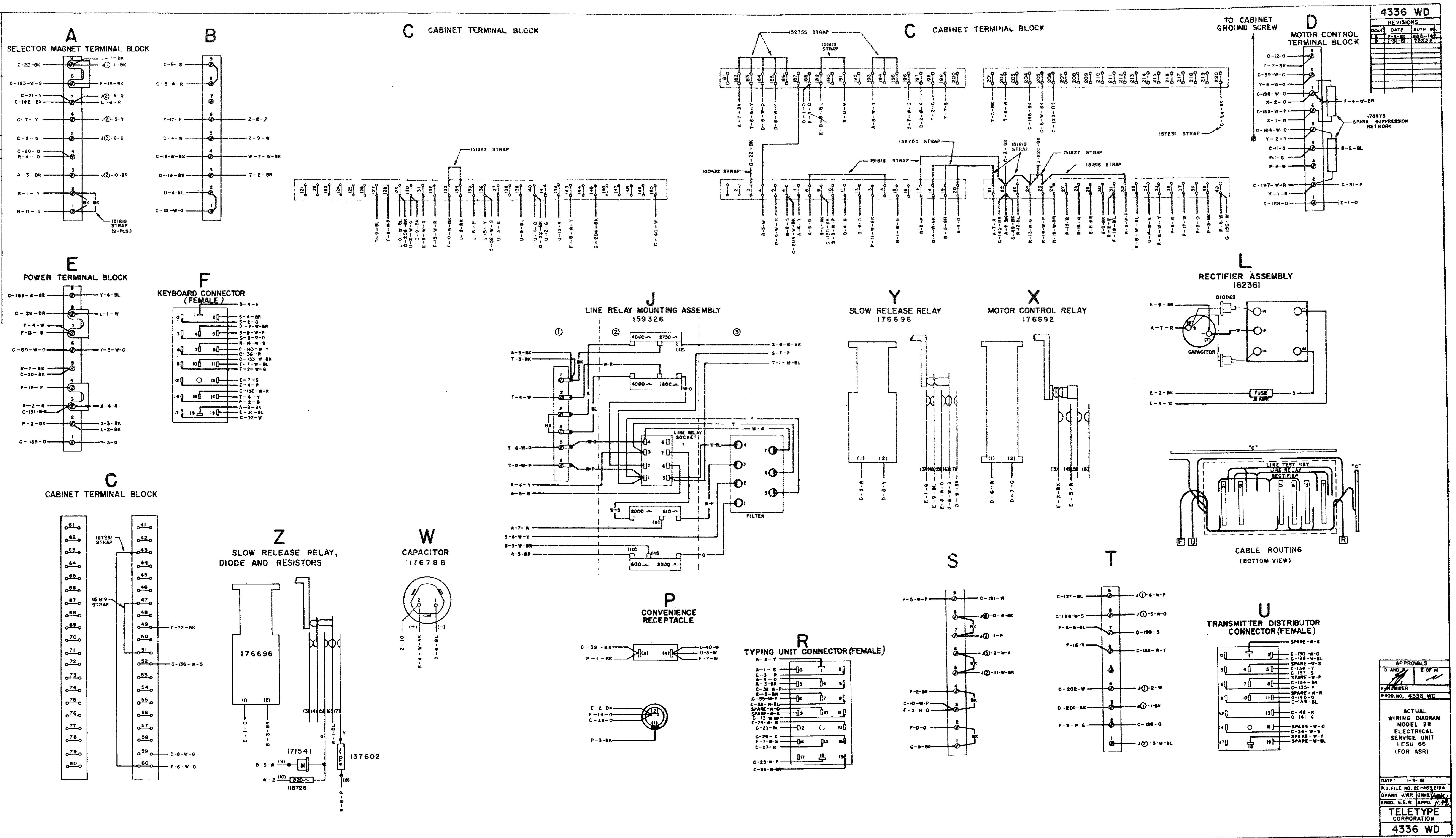
SCHEMATIC
WIRING DIAGRAM
MODEL 28 ASR

WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 66
AND ASSOCIATED
UNITS

TELETYPE
CORPORATION

4335 WD

NO.	NOTES
1.	WIRING LEGEND: A - 1 - W-BL DISTANT TERMINATING AREA DISTANT TERMINAL DESIGNATION WIRE COLOR CODE
2.	COLOR CODE BK — BLACK BR — BROWN R — RED O — ORANGE Y — YELLOW G — GREEN BL — BLUE P — PURPLE W — WHITE S — SLATE W-BK — WHITE - BLACK W-BR — WHITE - BROWN W-R — WHITE - RED W-O — WHITE - ORANGE W Y — WHITE - YELLOW W G — WHITE - GREEN W BL — WHITE - BLUE W P — WHITE - PURPLE W S — WHITE - SLATE
3.	UNIT WIRED FOR 115 VOLTS. 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
4.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION



4336 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	7-6-61	908-149
B	1-31-61	72322

APPROVALS

D AND R

E OF M

E NUMBER

PROD. NO. 4336 WD

ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 66
(FOR ASR)

DATE: 1-9-61

P.D. FILE NO. 22-A65,219A

DRAWN J.W.P. CHKD.

ENGD. G.E.W. APPD.

TELETYPE
CORPORATION

4336 WD

FOR ACTUAL WIRING SEE 4342 WD
115 VOLTS A.C. (NOTE 8)
POWER INPUT
GROUNDED SIDE
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
CONVENIENCE RECEPT.
4 AMP SL-BL FUSE
A.C. MOTOR, GOVERNED (NOTE 8)
SERIES FIELD WINDING
CENTRIFUGAL GOVERNOR
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY)
AC MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR, SEE ABOVE)
THERMAL CUTOUT
STARTING WINDING
OPERATING WINDING
MOTOR START RELAY
STARTING CAPACITOR
MOTOR CONTROL RELAY CONTACTS
COPY LIGHT LAMPS (IN CABINET)
MARGIN INDICATOR LAMP (IN CABINET)
MARGIN INDICATOR CONTACTS (IN KEYBOARD)
LIGHT SWITCH (IN CABINET)
SIGNAL BELL (IN CABINET)
SIGNAL BELL CONTACTS (IN TYPING UNIT FUNCTION BOX)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
RECTIFIER 500 MA (MAX) 115 V.D.C. OUTPUT
PRI. 115 V.A.C.
SEC. 85-95 V.A.C.
1/10 FUSE 0.8A
UC "G" CONTACT (IN STUNT BOX)
MOTOR CONTROL MAINTAIN CONTACT
MOTOR CONTROL RELAY
HERE IS KEYLEVER CONTACT
SLOW RELEASE RELAY CONTACT
ANSWER BACK CONTROL RELAY
KYBD UNIVERSAL CONTACT
SLOW RELEASE RELAY
FORM FEED OUT SOLENOID
GEAR SHIFT MAGNET
ANSWER BACK CONTROL RELAY CONTACTS
ANSWER BACK MAGNET
SELECTOR MAGNETS (ON TYPING UNIT)
LINE RELAY
LINE RELAY UNIT
MARKING
SPACING
SIGNAL GENERATOR CONTACTS (IN KEYBOARD)
ARC SUPPRESSOR
SPARE LEADS BROUGHT INTO ELECTRICAL SERVICE UNIT CONTAINER AND TAPED
SIGNAL LINE BREAK SWITCH (IN KEYBOARD)
STUNT BOX CONTACTS
L.F. BLANK LTRS
BLANK N
FIGS C
BLANK Z
FORM START XD CONTROL CONTACTS (ON TYPING UNIT)
RADIO INTERFERENCE SUPPRESSOR (IN R F FILTERED CABINET) (NOTE 7)
UNIVERSAL CONTACTS (ON TYPING UNIT)
SLOW RELEASE RELAY CONTACT
SIGNAL LINE
LOW PAPER CONTACT (ON CABINET)
PAPER OUT CONTACT (ON CABINET)
DC+
DC-
AC
60 MFD

4341 WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
A	11-24-61	71758
B	1-21-63	75770
C	11-13-63	78858

APPROVALS

E-NUMBER

PROD. NO. 4341 WD

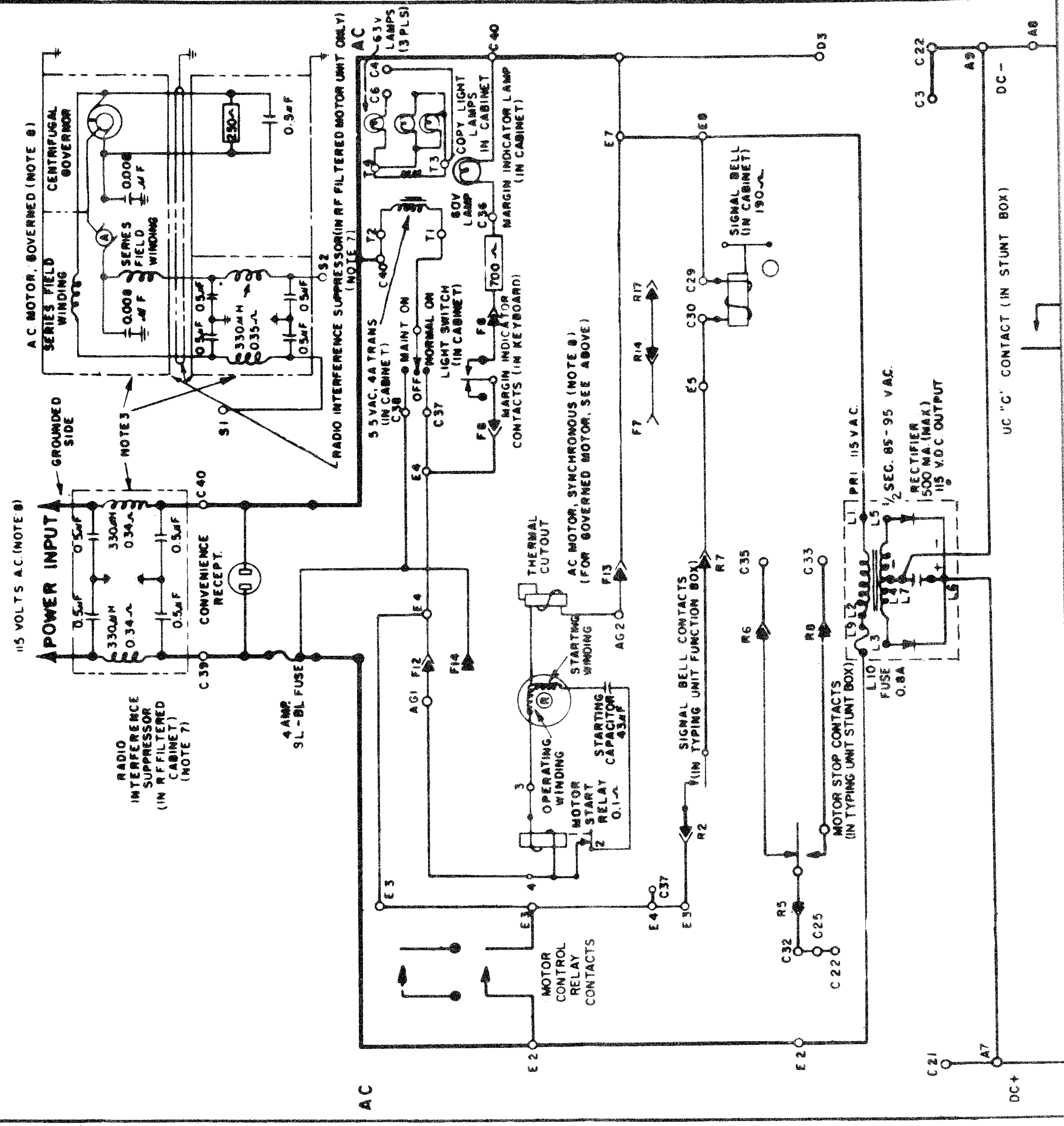
SCHEMATIC
WIRING DIAGRAM
MODEL 28 KSR
WITH FACILITIES
PROVIDED BY
ELECT. SERVICE UNIT
LESU 67
AND ASSOCIATED
UNITS

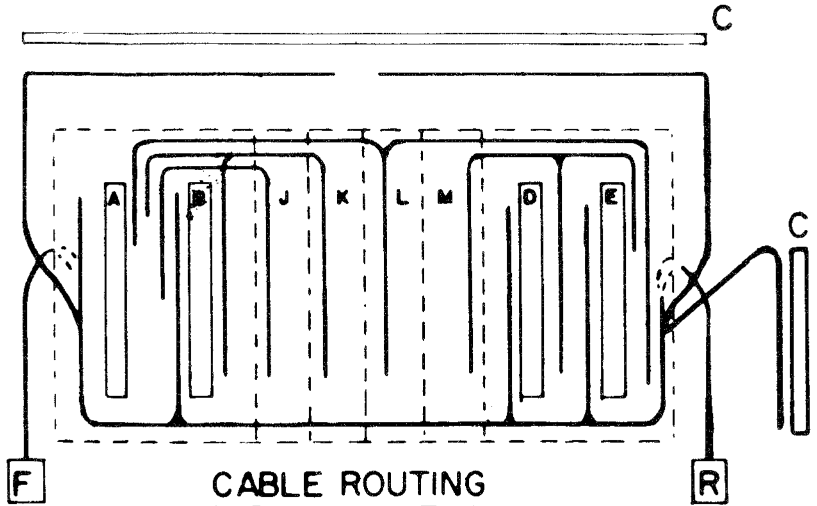
DATE: 1-11-61
P.D. FILE NO. 22-A65.219A
DRAWN. CHKD.
ENGD. G.E.W. APPD.

TELETYPE
CORPORATION

4341 WD

NO	NOTES	NO	NOTES
1	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS, SEE: WD NUMBER — UNITS DIRECTLY OPERABLE WITH LESU 4344 WD — CABINET LAC216 4342 WD — ELECTRICAL SERVICE UNIT—LESU 4343 WD — KEYBOARDS—LK 2900 WD — MOTOR UNITS—LMU3,4,6 4340 WD — PAGE TYPING UNITS—LP		
2	LEGEND ◀ V STUNT BOX CONNECTOR (IN LP) ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU). ○ B ○ C CABINET TERMINAL BLOCK. ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU) ○ E POWER TERMINAL BLOCK (IN LESU) ◀ F KEYBOARD CONNECTOR. ○ J① TERMINAL STRIP (ON LINE RELAY ASSEM. IN LESU) ◀ J② LINE RELAY CONNECTOR (IN LESU) ● J③ LINE RELAY FILTER (IN LESU) ◀ R TYPING UNIT CONNECTOR. ○ AG MOTOR TERMINAL BLOCK (IN LK) ○ M TERMINAL BLOCK (IN LK)		
3	DOT DASH — — —— LINES INDICATE FILTERING. SHIELDING AND SUPPRESSION NETWORKS.		
4	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.		
5	a. RESISTANCE VALUES IN OHMS (Ω) b. INDUCTANCE VALUES IN MICROHENRIES (μH) c. CAPACITANCE VALUES IN MICROFARADS (μF)		
6	FOR .060 AMP OPERATION ADD STRAP BETWEEN C61 AND C62		
7	a. USE POWER AND SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV.-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE. b. FOR OTHER INSTALLATIONS, OMIT SUPPRSSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECT TO TERMINALS SHOWN.		
8	USE SYNCHRONOUS MOTOR ON REGULATED 60~(±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~ UNREGULATED A.C.		
9	CONNECT C56 TO C57 TO BLIND PAGE PRINTER SELECTOR MAGNETS.		

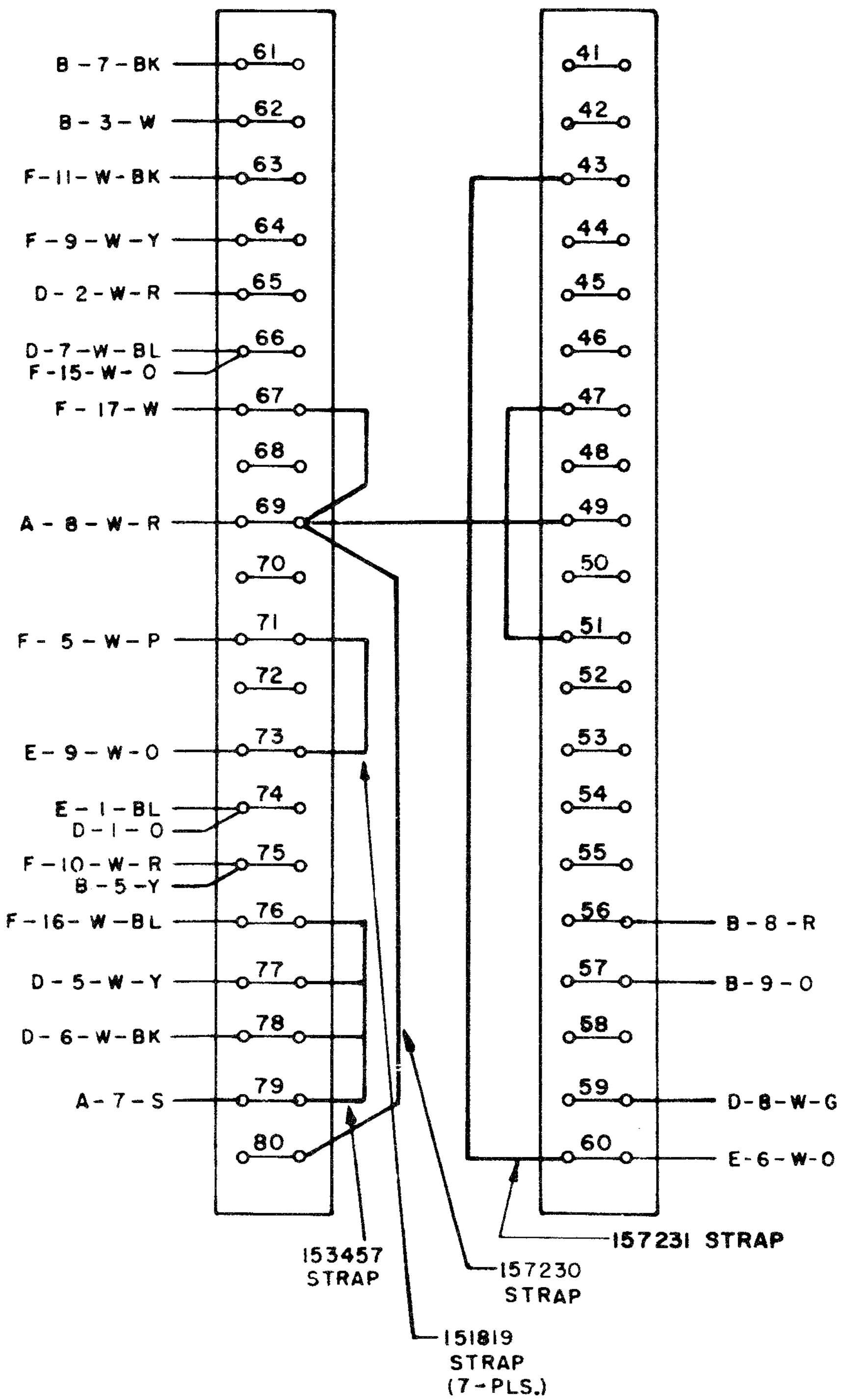

115 VOLTS A.C. (NOTE 8)
POWER INPUT
GROUNDED SIDE
NOTE 3
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED CABINET) (NOTE 7)
CONVENIENCE RECEPT.
4 AMP. 3L-BL FUSE
A.C. MOTOR, GOVERNED (NOTE 8)
SERIES FIELD WINDING
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
RADIO INTERFERENCE SUPPRESSOR (IN RF FILTERED MOTOR UNIT ONLY) (NOTE 7)
5.5 VAC. 4A TRANS (IN CABINET)
MAINT ON
NORMAL ON
OFF
LIGHT SWITCH (IN CABINET)
6.3V LAMPS (3 PLS)
COPY LIGHT LAMPS (IN CABINET)
60V LAMP
MARGIN INDICATOR LAMP (IN CABINET)
MARGIN INDICATOR CONTACTS (IN KEYBOARD)
SIGNAL BELL (IN CABINET) 190Ω
THERMAL CUTOUT
AC MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR, SEE ABOVE)
STARTING WINDING
OPERATING WINDING
STARTING CAPACITOR 43μF
MOTOR START RELAY 0.1Ω
MOTOR CONTROL RELAY CONTACTS
SIGNAL BELL CONTACTS (IN TYPING UNIT FUNCTION BOX)
MOTOR STOP CONTACTS (IN TYPING UNIT STUNT BOX)
FUSE 0.8A
PRI 115 VAC.
SEC. 85-95 VAC.
RECTIFIER 500 MA (MAX) 115 V.D.C OUTPUT
UC "C" CONTACT (IN STUNT BOX)
AC
DC-
DC+



CABLE ROUTING
(BOTTOM VIEW)

C

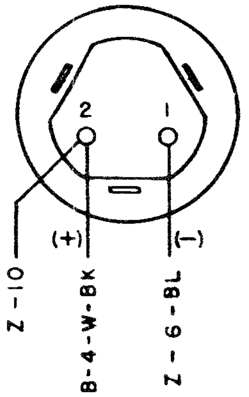
CABINET TERMINAL BLOCK



4342 WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
A	6-9-61	80E-14'
B	8-30-61	70817
C	11-29-61	752
D	1-21-63	75770

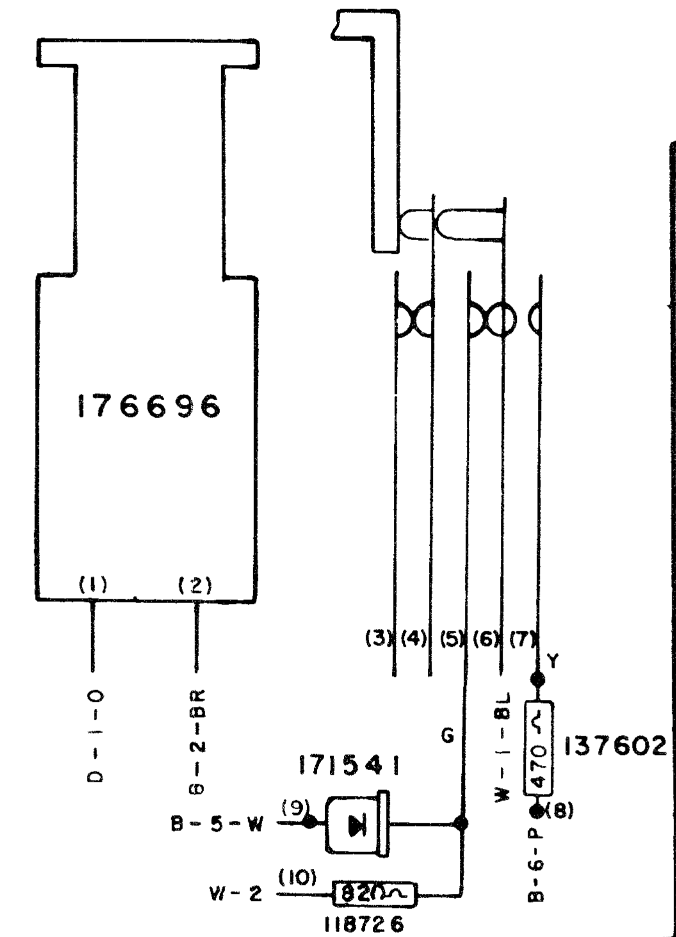
W

CAPACITOR
176788



Z

SLOW RELEASE RELAY, DIODE AND RESISTORS

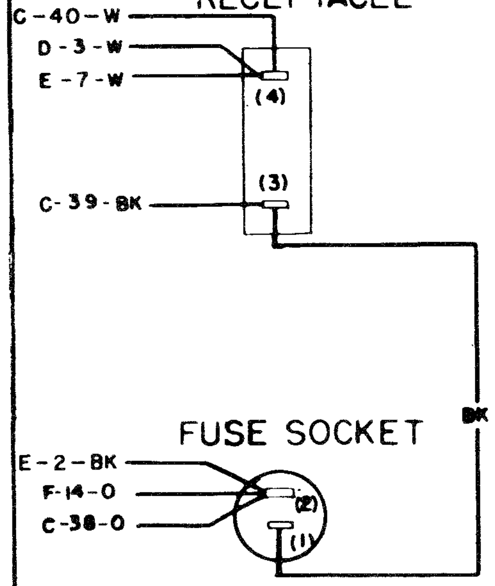


SEE SHEET 2
FOR NOTES

SHEET 1 OF 2

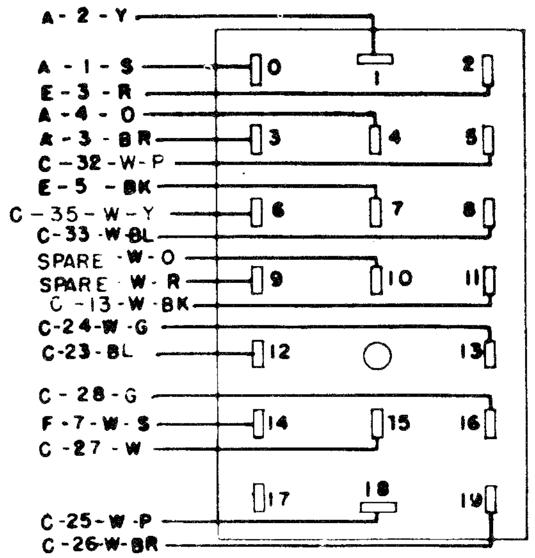
P

CONVENIENCE RECEPTACLE



R

TYPING UNIT CONNECTOR PLUG



FOR SCHEMATIC SEE 4341 WD

APPROVALS	
D AND R	E OF M
E-NUMBER	
PROD. NO. 4342 WD	

ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 67
(FOR KSR)

DATE: 1-4-61	
P.D. FILE NO. 22-A65.219A	
DRAWN	CHKD.
ENGD. G.E.W.	APPD.

TELETYPE
CORPORATION

4342 WD

4342 WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
D	1-21-63	75770

SHEET 2 OF 2

ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 67
(FOR KSR)

TELETYPE
CORPORATION

4342 WD

NOTES

1. WIRING LEGEND:

A - 1 - W - BL
- A — DISTANT TERMINATING AREA
- 1 — DISTANT TERMINA DESIGNATION
- W - BL — WIRE COLOR CODE

2. COLOR CODE

BK - BLACK	W - BK - WHITE - BLACK
BR - BROWN	W - BR - WHITE - BROWN
R - RED	W - R - WHITE - RED
O - ORANGE	W - O - WHITE - ORANGE
Y - YELLOW	W - Y - WHITE - YELLOW
G - GREEN	W - G - WHITE - GREEN
BL - BLUE	W - BL - WHITE - BLUE
P - PURPLE	W - P - WHITE - PURPLE
W - WHITE	W - S - WHITE - SLATE
S - SLATE	

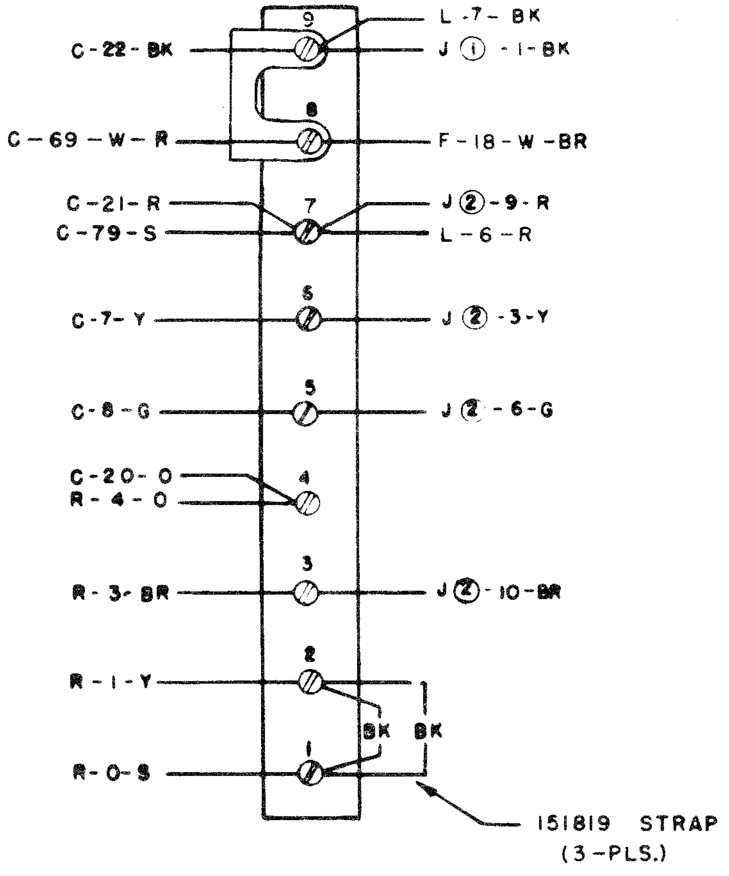
3. UNIT WIRED FOR 115 VOLTS, 50 TO 60 CYCLE A.C POWER INPUT ONLY.

4. PLUGS VIEWED FROM SOLDER TERMINAL ENDS

5. CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION.

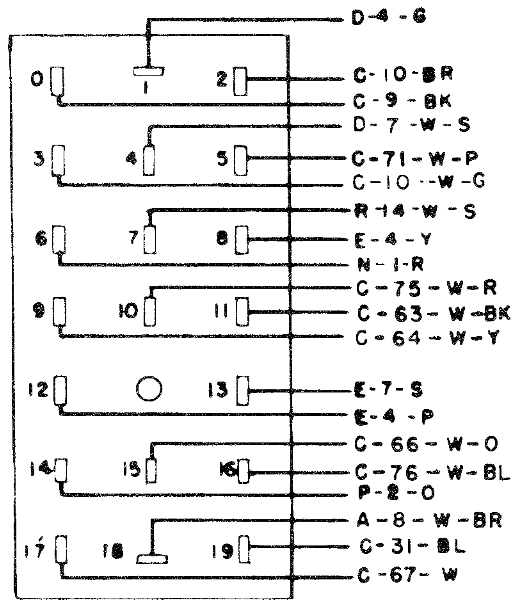
A

SELECTOR MAGNET TERMINAL BLOCK

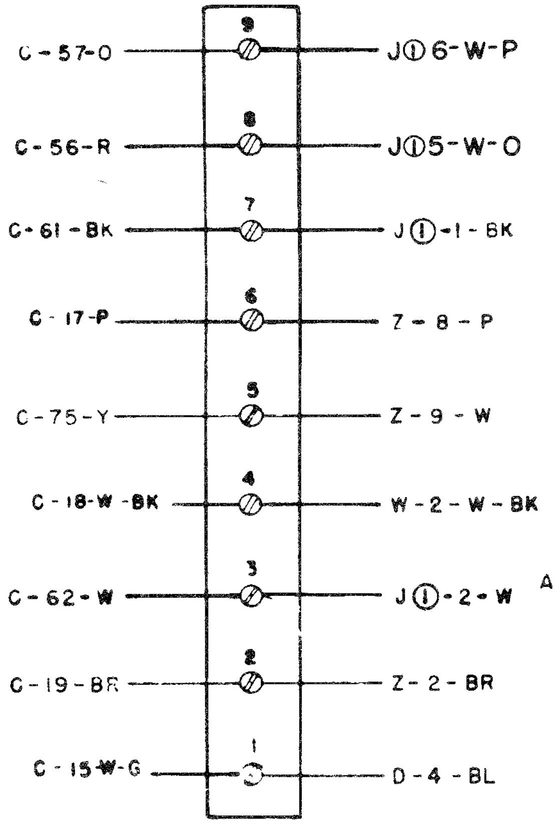


F

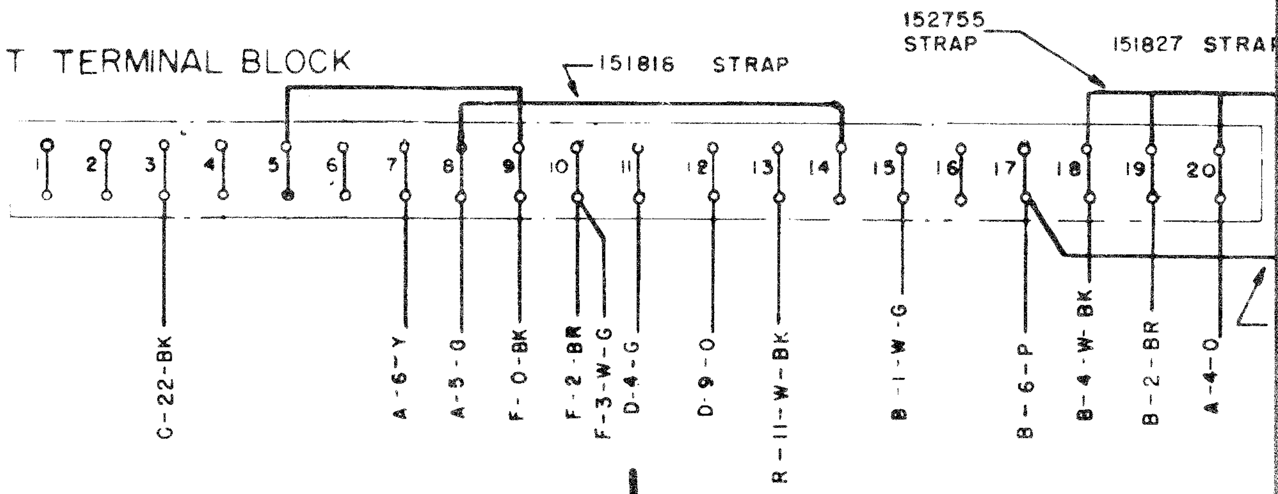
KEYBOARD CONNECTOR PLUG



B



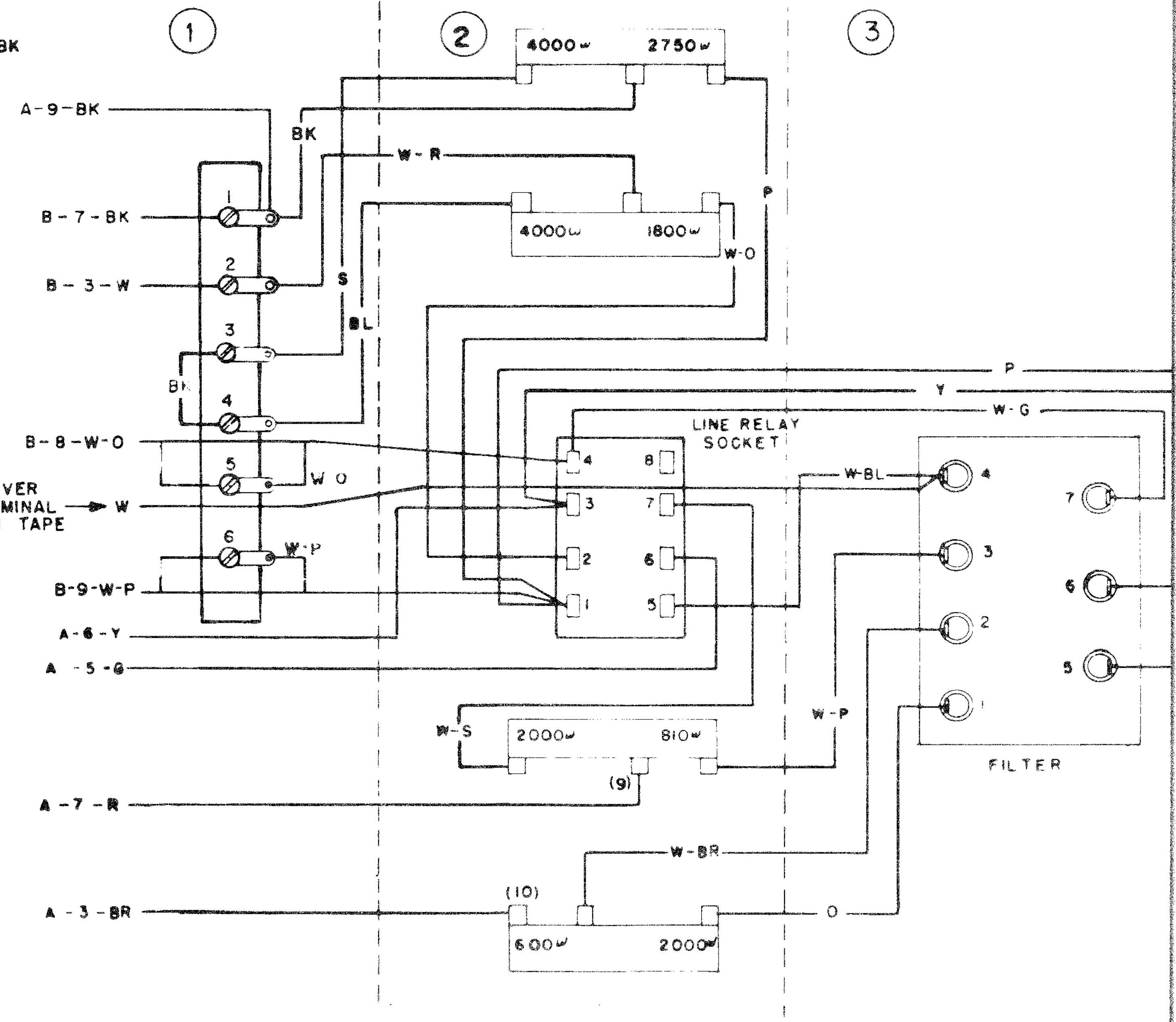
CABINET TERMINAL BLOCK



J

152623

LINE RELAY MOUNTING ASSEMBLY



NOTES

WIRING LEGEND:

A-1-W-BL
- A — DISTANT TERMINATING AREA
- 1 — DISTANT TERMINAL DESIGNATION
- W-BL — WIRE COLOR CODE

COLOR CODE

BK	BLACK	W-BK	WHITE-BLACK
BR	BROWN	W-BR	WHITE-BROWN
R	RED	W-R	WHITE-RED
O	ORANGE	W-O	WHITE-ORANGE
Y	YELLOW	W-Y	WHITE-YELLOW
G	GREEN	W-G	WHITE-GREEN
BL	BLUE	W-BL	WHITE-BLUE
P	PURPLE		
W	WHITE	W-S	WHITE-SLATE
S	SLATE		

UNIT WIRED FOR 115 VOLTS 50 TO 60 CYCLE A.C. POWER INPUT ONLY.

CONNECTOR VIEWED FROM SOLDER TERMINAL END.

CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP OPERATION REMOVE AND ADD CONNECTIONS AS TABULATED BELOW.

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020 AMP.	J①1-J①2,	J①3-J①4

RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. FOR CONTINUOUS OPERATION REMOVE LEAD L-2-BK FROM TERMINAL E-2 AND CONNECT TO TERMINAL E-1.

LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND MOTOR CONTROL RELAY.

SELECTOR MAGNETS ARE TO BE WIRED AS SHOWN FOR 30 MILLIAMPERE OPERATION WHEN THE LINE RELAY IS USED.

ASSOC. CABLE NUMBERS

159939	CABLE ASSEM., LESU75
153477	CABLE ASSEM., RECTIFIER
164030	CABLE ASSEM., LINE RELAY MTG. ASSEM.

SELECTOR MAGNETS CAN BE CONNECTED DIRECTLY IN THE SIGNAL LINE CIRCUIT FOR NEUTRAL OPERATION AS FOLLOWS:

REMOVE LINE RELAY
20 MILLIAMPERE, 60 & 75 WPM OPERATION
(OR ANY INTERMEDIATE SPEED)
A. STRAP A5 TO A3.
B. MOVE BLUE LEAD FROM TERMINAL A8 TO TERMINAL A6.
60 MILLIAMPERE, 60, 75 & 100 WPM OPERATION
(OR ANY INTERMEDIATE SPEED)
A & B. SAME AS ABOVE.
C. CHANGE WIRING ON SELECTOR MAGNETS FOR 60 MILLIAMPERE OPERATION.

A

4430WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
A	12-7-61	71860

ACTUAL WIRING DIAGRAM MODEL 28 ELECTRICAL SERVICE UNIT LESU75

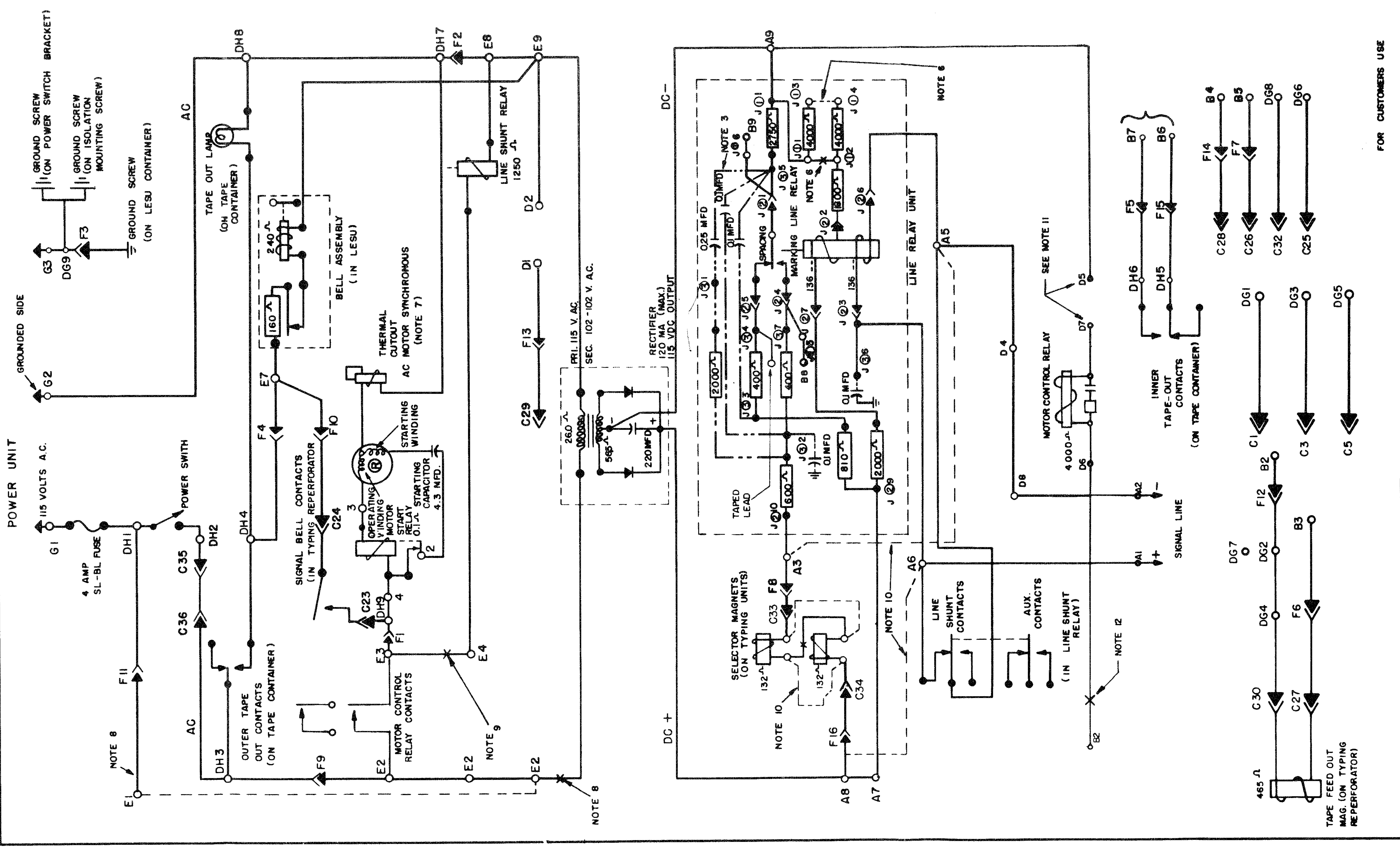
APPROVALS

D AND R	E OF M
E. NUMBER	
PROD. NO. 4430WD	
DATE: 3-27-61	
P.D. FILE NO. 22-A65[illegible]9A	
DRAWN N.K.G.	CHKD.
ENG'D I.M.B.	APPD.

TELETYPE CORPORATION

4430WD

NO.	NOTES
1.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE WD NUMBER — UNITS DIRECTLY OPERABLE WITH LESU75 4430 WD — ELECTRICAL SERVICE UNIT LESU75 2900 WD — MOTOR UNITS - LMU 3,4,6. 3736 WD — TYPING REPERFORATOR BASE LRB21 3628 WD — TYPING RERERFORATOR LPR42
2.	LEGEND O G 3-POINT CONNECTOR (ON BASE) O DG TERMINAL BLOCK (ON BASE) O DH TERMINAL BLOCK (ON BASE) ≪ F 16-POINT CONNECTOR O A TERMINAL BLOCK (IN LESU) O B TERMINAL BLOCK (IN LESU) ≪ C 36-POINT CONNECTOR (ON BASE) O D TERMINAL BLOCK (IN LESU) O E TERMINAL BLOCK (IN LESU) O J ① TERMINAL STRIP ON LINE RELAY (IN LESU) ≪ J ② LINE RELAY CONNECTOR (IN LESU) O J ③ LINE RELAY FILTER (IN LESU)
3.	DOT-DASH (-·——·-) LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.
4.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS
5.	(A) RESISTENCE VALUES IN OHMS -(Ω) (B) INDUCTANCE VALUES IN MICROHENRIES (MH) (C) CAPACITANCE VALUES IN MICROFARADS (MFD)
6.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD DASH LINE (----) CONNECTION AND OMIT CONNECTION MARKED (—✕—) IN LINE RELAY.
7.	USE SYNCHRONOUS MOTOR ON REGULATED 60 ∿ (±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60 ∿ UNREGULATED A.C.
8.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH A. FOR CONTINOUS OPERATION MOVE PRIMARY (INPUT) LEAD FROM TERMINAL E2 TO TERMINAL E1
9.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND MOTOR CONTROL RELAY.
10.	FOR SPECIAL APPLICATIONS WHEN LESU75 IS USED WITH LRB 20, THE FOLLOWING NOTE APPLIES; SELECTOR MAGNETS CAN BE OPERATED DIRECTLY IN A NEUTRAL SIGNAL LINE AS FOLLOWS REMOVE LINE RELAY FOR 20 MILLIAMPERE, 60 AND 75 WPM OPERATION (OR ANY INTERMEDIATE SPEED.) 1. STRAP A5 TO A3 2. MOVE BLUE LEAD FROM TERMINAL A8 TO A6. FOR 60 MILLIAMPERE, 60, 75 & 100 WPM OPERATION (OR ANY INTERMEDIATE SPEED.) 1 AND 2 SAME AS ABOVE 3. ADD DASHED (---) LEAD, OMIT ✕ LEAD ON SELECTOR MAGNETS (REFER TO 4430WD)
11.	CUSTOMER SWITCH ACROSS D5 AND D7.
12.	TERMINAL B2 IS PROVIDED TO CONNECT MOTOR CONTROL RELAY FOR 48 V.D.C. OPERATION FOR 120 V.D.C. OPERATION, REMOVE STRAP FROM B2 AND CONNECT TO A7.



4431 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
A	12-7-61	71860
B	11-14-63	78862

SCHEMATIC
WIRING DIAGRAM
MODEL 28

REPERFORATOR BASE
LRB21 & LPR42

ELECT SERVICE
UNIT
LESU75

APPROVALS	
D AND B	E OF M
E-NUMBER	
PROD. NO. 4431WD	
DATE 3-29-61	
P.D. FILE NO. 22-A65,219A	
DRAWN N.K.G.	CHKD
ENGD I.M.B.	APPD

TELETYPE
CORPORATION

4431 WD

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

ISSUE CONTROL RECORD

SHEET NO.	ISSUE 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	X	X	X	X	X	X	X	X	X	X	X							
2	X	X	X	X	X	X	X	X	X	X								
3	X	X	X	X	X	X	X	X	X	X	X							

2

4486 WD

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
1	11-23-66	92182
2	1-25-67	92056

ISSUE CONTROL
SHEET 1 OF 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL SERVICE UNIT
LESU72

WD NUMBER 4486WD	
DRAWN D.W.J.	CHKD.
ENGD. B.P.K.	APPD.

TELETYPE
CORPORATION

4486 WD

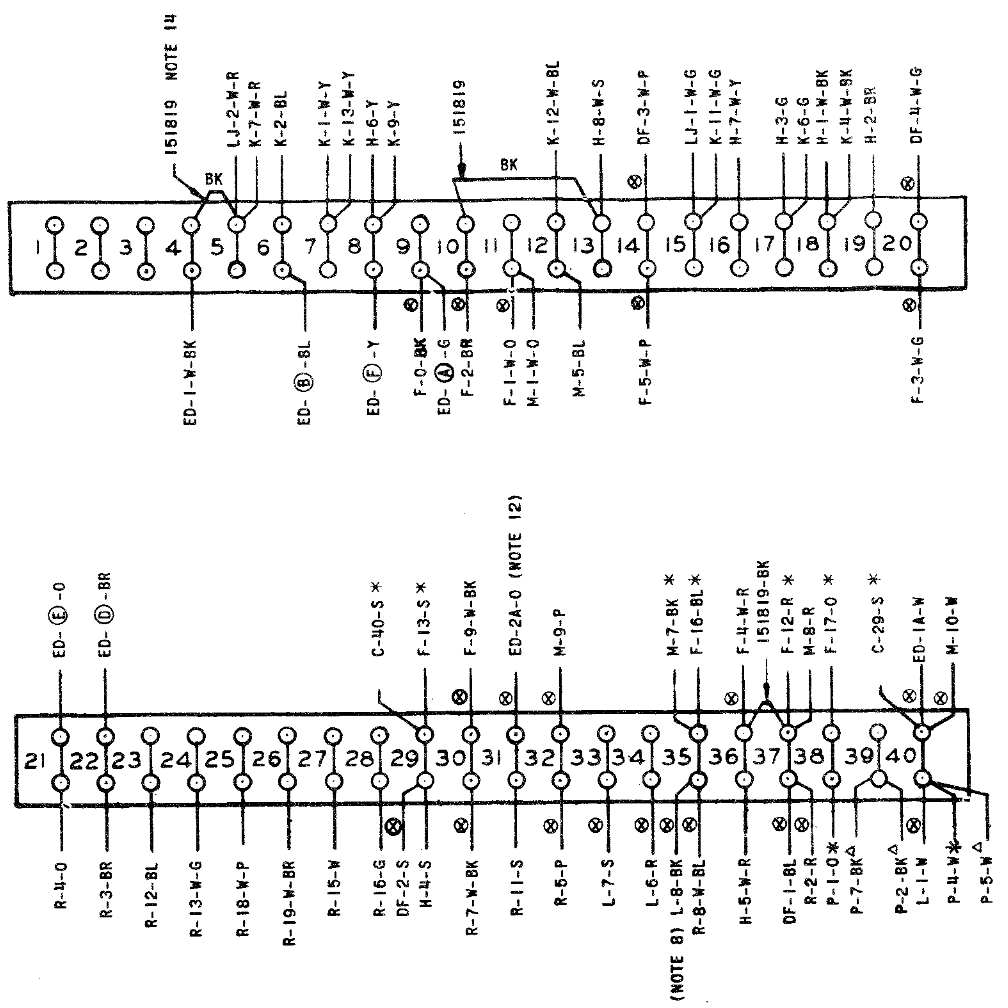
TC 482 (8-66) SEE R&D ROUTINE #5 FOR USE OF THIS FORM

NO.	NOTES
1.	WIRING LEGEND: DISTANT TERMINATING AREA DISTANT TERMINATING DESIGNATION A-1-W-BL WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK BR - BROWN R - RED O - ORANGE Y - YELLOW G - GREEN BL - BLUE P - PURPLE W - WHITE S - SLATE △ DENOTES 16 GA. WIRE ✳ DENOTES 18 GA. WIRE ⊗ DENOTES 22 GA. WIRE ALL OTHER WIRE 24 GA.
3.	UNIT WIRED FOR 115 VOLTS, 60 CYCLE AC POWER INPUT ONLY.
4.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
5.	TERMINALS C1 TO C3 ARE RESERVED FOR CUSTOMER USE.
6.	CONTACTS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
7.	SPARE LEADS FROM THE KEYBOARD CONNECTOR PLUG ARE TERMINATED AT THE LEFT END OF THE ELECTRICAL SERVICE UNIT. SPARE LEADS FROM THE TYPING UNIT CONNECTOR ARE TERMINATED AT THE RIGHT END OF THE ELECTRICAL SERVICE UNIT.
8.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. FOR CONTINUOUS OPERATION, MOVE L-9-BK WIRE FROM C-35 TO C-39. 110V DC C-34 (+) C-33 (-)
9.	WHEN SIGNAL LINE BREAK SWITCH IS NOT USED, ADD STRAP BETWEEN C-10 AND C-11.
10.	A. LINE SHUNT RELAY SHOWN CONTROLLED BY MOTOR CONTROL POWER CONTACTS. FOR DIRECT CONTROL OF LINE SHUNT RELAY FROM POWER SWITCH, REMOVE STRAP BETWEEN C-36 - C-37 AND ADD STRAP BETWEEN C-35 - C-36.
11.	TO DISABLE MOTOR CONTROL FEATURE ELECTRICALLY, ADD STRAP BETWEEN C-35 - C-37.
12.	SELECTOR MAGNET DRIVER SHOWN CONTROLLED BY POWER SWITCH. FOR CONTINUOUS OPERATION, MOVE ED-2A-O WIRE FROM C-31 TO C-38.
13.	BEFORE INSTALLING SELECTOR MAGNET DRIVER, REMOVE STRAP BETWEEN TERMINALS 1 AND 2 ON CIRCUIT CARD.
14.	WIRING SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. NEUTRAL OPERATION, REMOVE STRAPS BETWEEN C-4 AND C-5, M-1 AND M-2, M-2 AND M-4. MOVE STRAP BETWEEN M-3 AND M-12 TO M-3 AND M-4.
15.	FOR SCHEMATIC WIRING DIAGRAM, SEE 4487WD.
16.	USE 155755 INSULATING SLEEVES (2 PLS.)
17.	RECTIFIER SUPPLIED WITH 27,000 OHM BLEEDER RESISTOR. THE RESISTOR MAY BE REMOVED FOR CUSTOMER CIRCUITRY NOT DESIRING THIS FEATURE.
18.	KEYBOARD TERMINAL F18 RESERVED FOR POLAR SIGNAL APPLICATION. FOR POLAR OPERATION, REMOVE STRAP BETWEEN C-4 AND C-5. SEE 4445WD FOR ASSOCIATED STRAPPING CHANGES IN ELECTRONIC DRIVER.
19.	THE W-Y AND W-S SPARE LEADS ON THE F CONNECTOR ARE RESERVED FOR THE BUSY LAMP APPLICATION OF THE 194086 MODIFICATION KIT FOR SELECTIVE CALLING.

NO.	NOTES
20.	
21.	LOCATE RESISTOR ON THE SIDE OF THE CAPACITOR NEAREST THE RECTIFIER FUSE HOLDER.
22.	TIE AND/OR ROUTE CABLES TO AVOID CONTACT WITH THESE RESISTORS.
23.	SL-BL INDICATES SLOW-BLOWING.
24.	X DENOTES SPLICED AND TAPED WIRE.
25.	IF THE AC INPUT POWER PLUG IS NOT USED AND THE AC POWER IS WIRED DIRECTLY TO TERMINALS C39 AND C40, THEN IT IS NECESSARY THAT THE OFFICE GROUND LEAD BE ATTACHED TO THE TERMINAL BLOCK MOUNTING PLATE. A NO. 6 SCREW, FLATWASHER, AND STAR WASHER ARE INCLUDED IN A BAG FOR THIS PURPOSE. REMOVE THE WIRES IN THE 199233 CABLE FROM TERMINALS C 39 AND C40 AND TAPE AND TIE THEM BACK TO THE CABLE.
26.	NOT INCLUDED ON SOME SETS.

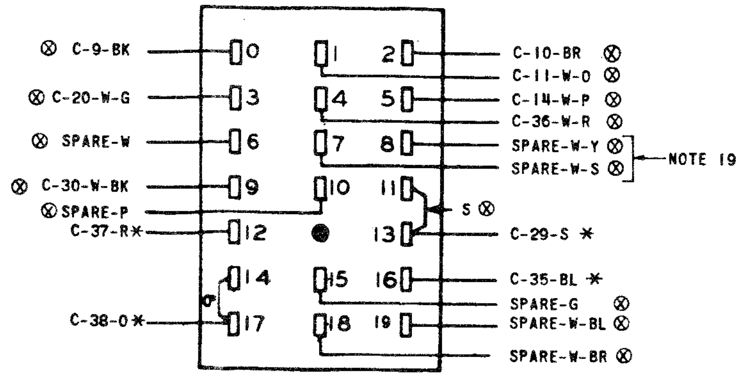
C

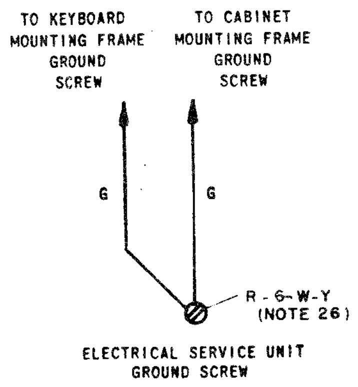
LESU TERMINAL BLOCK



F

KEYBOARD CONNECTOR RECEPTACLE
178520 CABLE ASSEMBLY




TO KEYBOARD MOUNTING FRAME GROUND SCREW
TO CABINET MOUNTING FRAME GROUND SCREW
G
G
R-6-W-Y (NOTE 26)
ELECTRICAL SERVICE UNIT GROUND SCREW

NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

4486 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	9-21-62	74590
B	10-4-62	74722
C	10-26-62	74934
~~D~~ 5	1-28-63	75788
~~E~~ 6	2-4-63	75857
~~F~~ 7	3-1-63	76176
8	3-11-63	75994
9	8-26-63	76157
10	11-14-63	78849
11	10-7-65	88785
12	1-25-67	92056

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL SERVICE UNIT
LESU72

APPROVALS	
D AND R	E OF M
------	------

E-NUMBER

PROD. NO. 4486WD

DATE 9-11-61

P.D. FILE NO. 66-30.65AA

DRAWN E.C.W.	CHKD.
ENGD. B.P.K.	APPD. T.I.P.

TELETYPE
CORPORATION

4486 WD

1/2

SEE SHEET 1 FOR NOTES

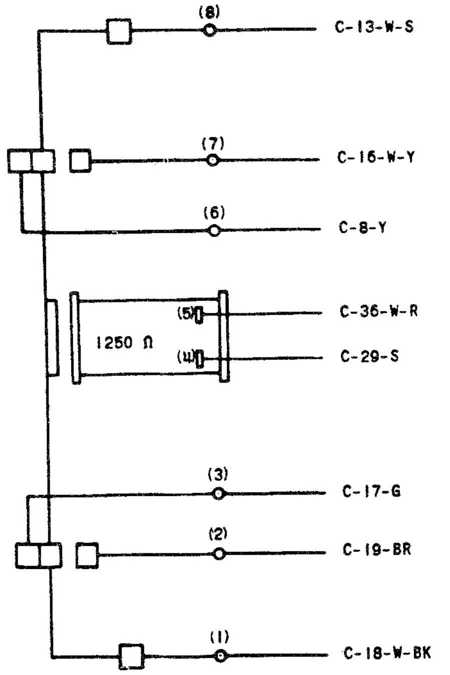
NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

4486WD

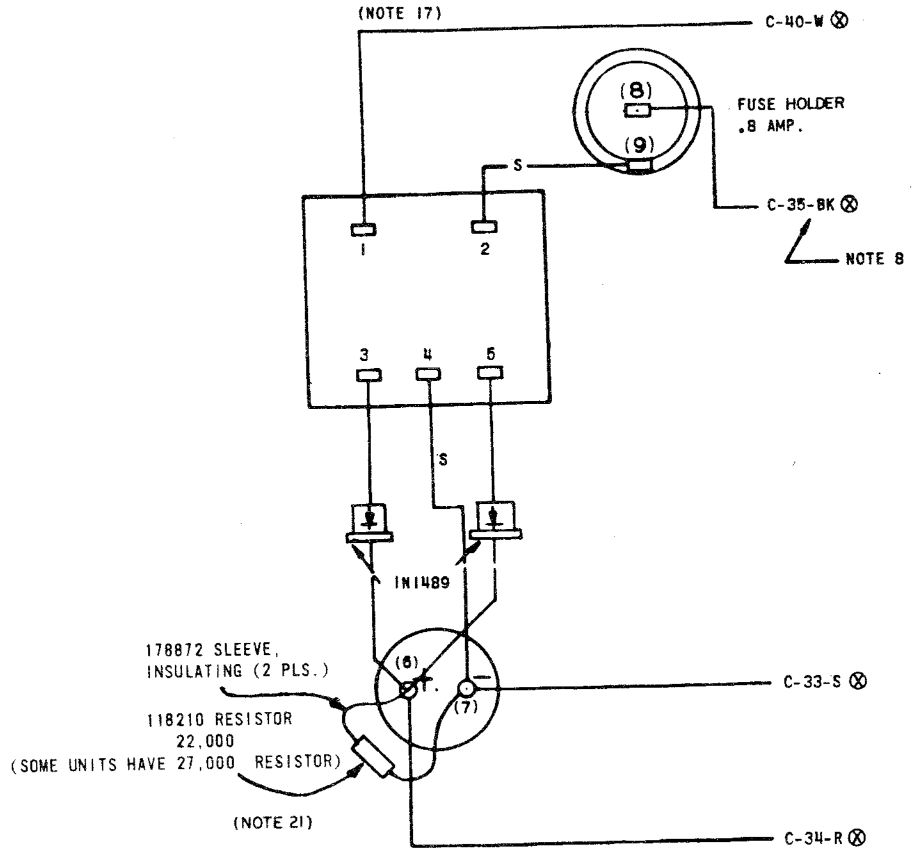
REVISIONS

ISSUE	DATE	AUTH. NO.
A	9-21-62	74590
B	10-4-62	74722
C	10-26-62	74934
~~D~~ 5	1-28-63	75788
~~E~~ 6	2-4-63	75857
~~F~~ 7	3-1-63	76176
8	3-11-63	75994
9	8-26-63	76157
10	11-14-63	78849
11	11-23-66	92182

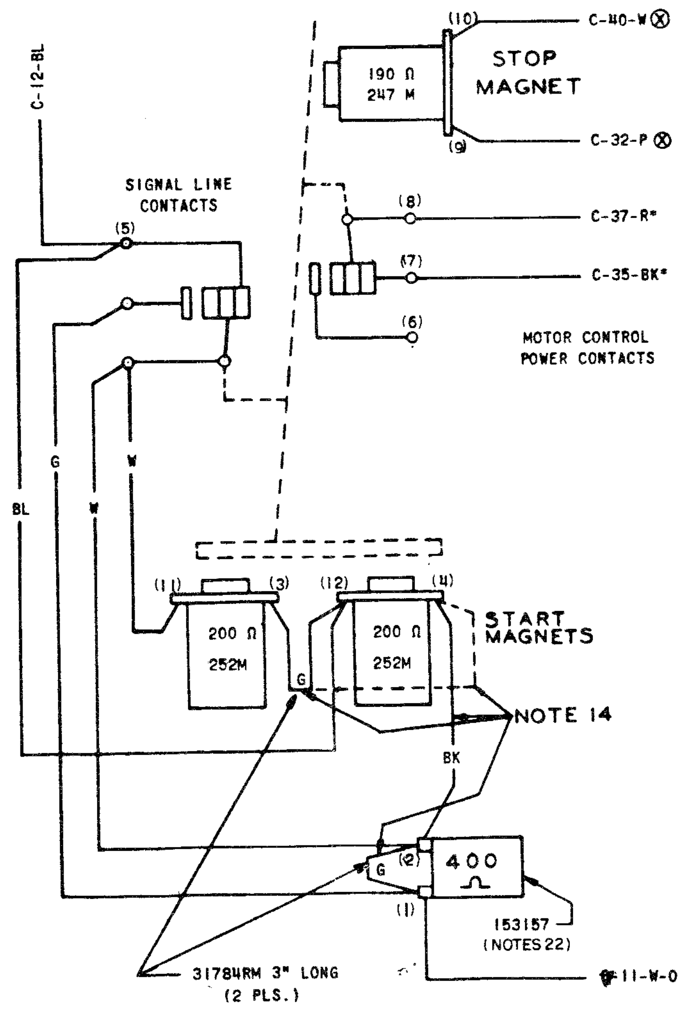
H
LINE SHUNT RELAY
178515 CABLE ASSEMBLY



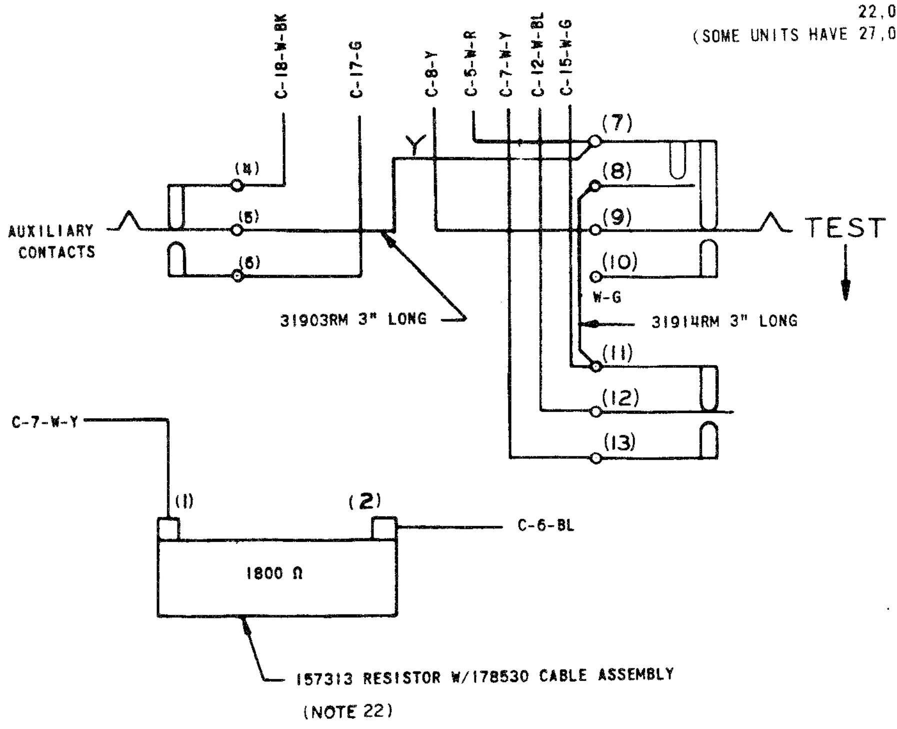
L
RECTIFIER
178521 CABLE ASSEMBLY



M
MOTOR CONTROL ASSEMBLY
178519 CABLE ASSEMBLY



K
LINE TEST KEY
178513 CABLE ASSEMBLY



SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL SERVICE UNIT
LESU72

APPROVALS	
D AND R	E OF M
-----	-----

E-NUMBER

PROD. NO. 4486WD

DATE 9-11-61

P.D. FILE NO. 66-30.65AA

DRAWN E.C.W.	CHKD.
ENGD. B.P.K.	APPD. T.I.P.

TELETYPE
CORPORATION

4486WD

TC 434 (6-60)

SEE SHEET I FOR NOTES

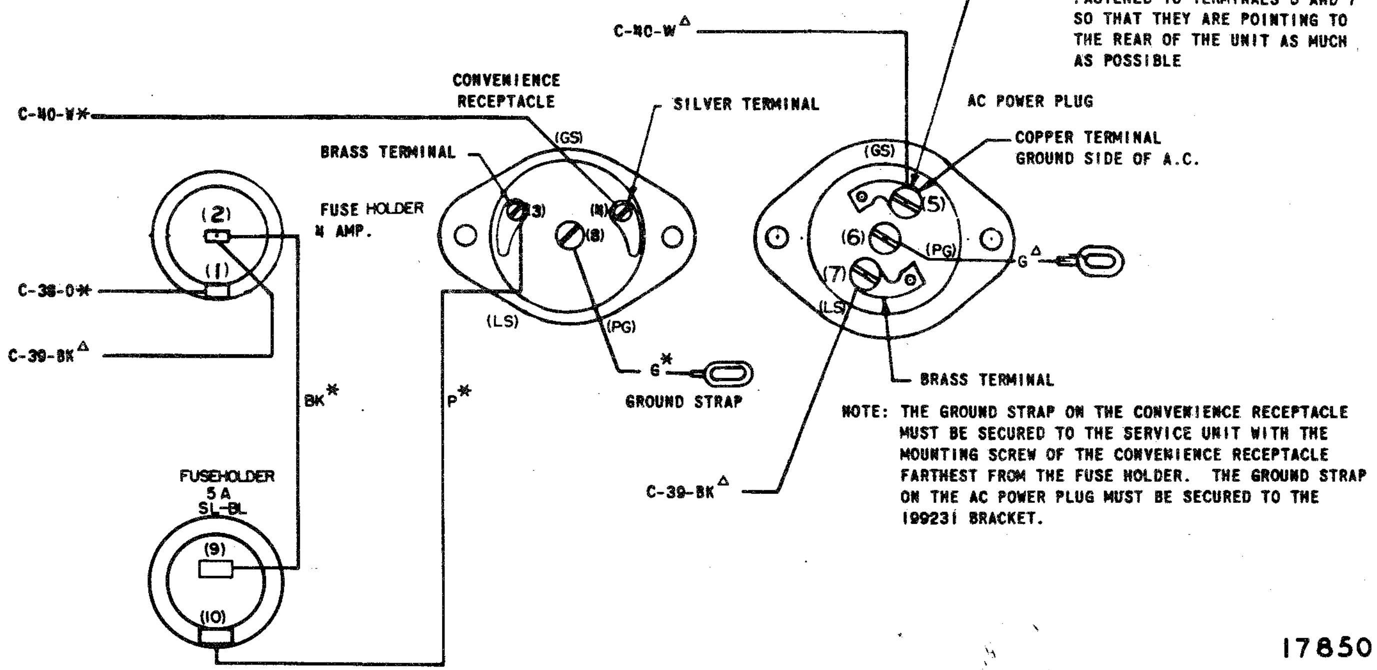
NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

4486WD

REVISIONS

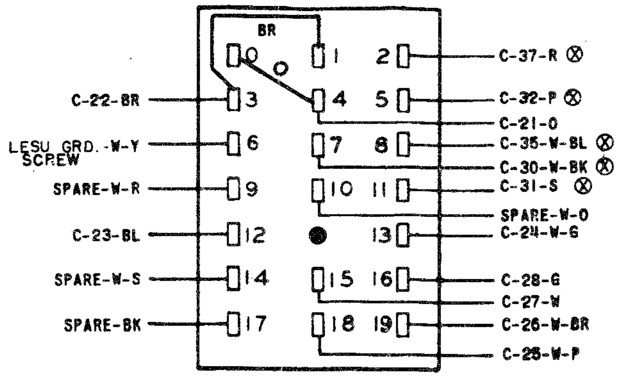
ISSUE	DATE	AUTH. NO.
A	9-21-62	74590
B	10-4-62	74722
C	10-26-62	74934
~~D~~ 5	1-28-63	75788
~~E~~ 6	2-4-63	75857
~~F~~ 7	3-1-63	76176
8	3-11-63	75994
9	8-26-63	76157
10	11-14-63	78849
11	10-7-65	88785
12	1-24-67	92056

P
A.C. SERVICE FACILITY
178517 & 199233 CABLE ASSEMBLIES
(NOTE 16)

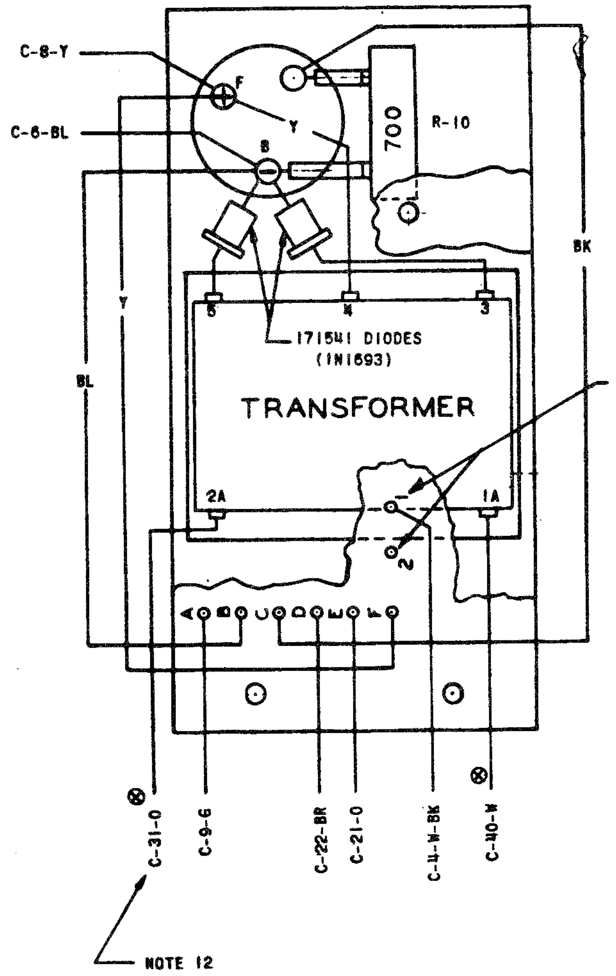


NOTE: THE SLEEVING COVERED TERMINALS ON THE 199233 CABLE MUST BE FASTENED TO TERMINALS 5 AND 7 SO THAT THEY ARE POINTING TO THE REAR OF THE UNIT AS MUCH AS POSSIBLE
C-40-W△
C-40-W✻
CONVENIENCE RECEPTACLE
SILVER TERMINAL
AC POWER PLUG
BRASS TERMINAL
(GS)
(GS)
COPPER TERMINAL GROUND SIDE OF A.C.
FUSE HOLDER 4 AMP.
(2)
(1)
(3)
(4)
(8)
(5)
(6)
(7)
(PG)
(LS)
(PG)
(LS)
G△
C-38-O✻
C-39-BK△
BK✻
P✻
G✻
GROUND STRAP
BRASS TERMINAL
NOTE: THE GROUND STRAP ON THE CONVENIENCE RECEPTACLE MUST BE SECURED TO THE SERVICE UNIT WITH THE MOUNTING SCREW OF THE CONVENIENCE RECEPTACLE FARTHEST FROM THE FUSE HOLDER. THE GROUND STRAP ON THE AC POWER PLUG MUST BE SECURED TO THE 199231 BRACKET.
C-39-BK△
FUSEHOLDER 5A SL-BL
(9)
(10)

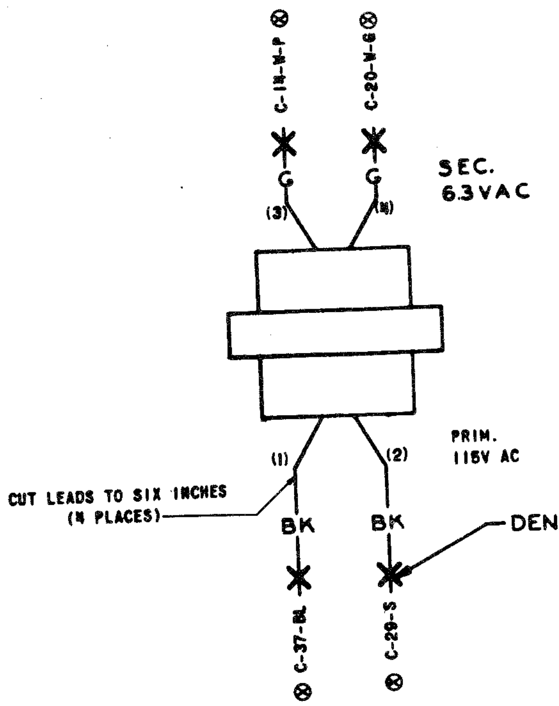
R
TYPING UNIT CONNECTOR RECEPTACLE
178523
CABLE ASSEMBLY



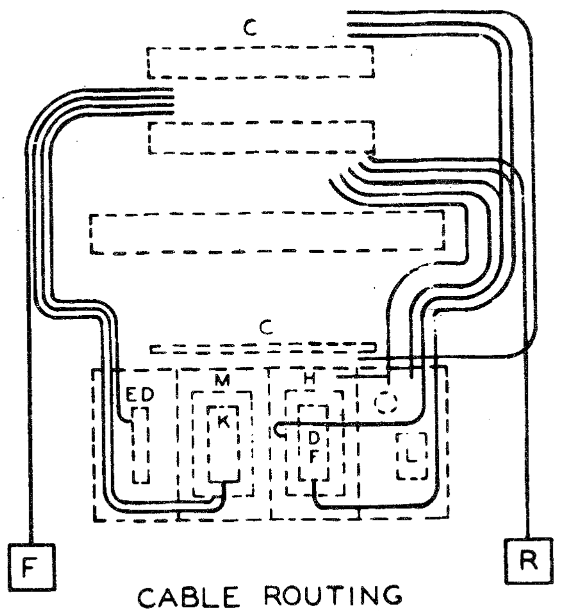
ED
SELECTOR MAGNET DRIVER
178508 CABLE ASSEMBLY
(NOTE 13)



DF
COPYLAMP TRANSFORMER
178509 CABLE ASSEMBLY

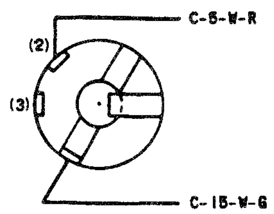


(TOP VIEW)



CABLE ROUTING
(BOTTOM VIEW)

LJ
LINE JACK
178511
CABLE ASSEMBLY



SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 3

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL SERVICE UNIT
LESU72

APPROVALS	
D AND R	E OF M
-----	-----

E-NUMBER

PROD. NO. 4486WD

DATE 9-11-61

P.D. FILE NO. 66-30.66AA

DRAWN E.C.W.	CHKD.
ENGD. S.P.K.	APPD. T.I.P.

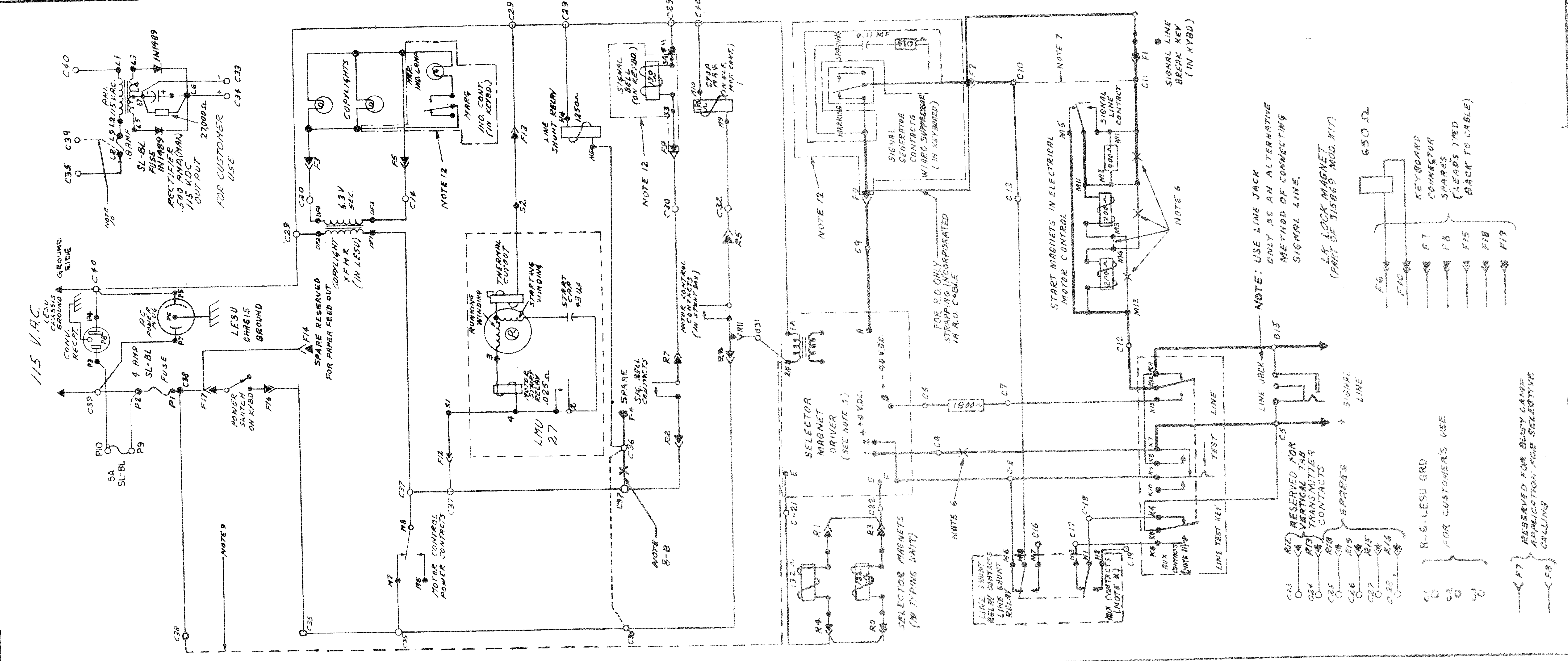
TELETYPE
CORPORATION

4486WD

12

R-3½ 29¾ x 10¾

NO	NOTES
1.	LEGEND ○ C LESU TERMINAL BLOCK « F KEYBOARD CONNECTOR ◉ S MOTOR TERMINAL BLOCK, KYBD. « R TYPING UNIT CONNECTOR ● H LINE SHUNT RELAY } IN LESU ● L RECTIFIER ASSEMBLY ● K LINE TEST KEY ◉ M MOTOR CONTROL ASSEMBLY ● P A.C. SERVICE FACILITY ● OF COPYLAMP TRANSFORMER
2.	ASSOCIATED ACTUAL WIRING DIAGRAM 4484 WD KEYBOARD ACTUAL W.D. 2900 WD LMU 27 MOTOR UNIT W.D. 4486 WD LESU 72 ACTUAL W.D.
3	REFER TO 4445 WD FOR SCHEMATIC WIRING DIAGRAM OF ELECTRONIC DRIVER
4.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
5.	USE SYNCHRONOUS MOTOR ON REGULATED 60 CYCLE (±1%) A.C. POWER ONLY.
6.	CIRCUIT SHOWN .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. NEUTRAL SIGNAL LINE CURRENT REMOVE CONNECTIONS MARKED (✱) AT C4, C5, M1, M2, M12 ADD CONECTIONS MARKED (---) AT M3, M4
7	WHEN SIGNAL LINE BREAK SWITCH IS NOT USED ADD CONNECTIONS MARKED (----) AT TERMINALS C10 AND C11.
8.	A. LINE SHUNT RELAY SHOWN CONTROLED BY ELECTRICAL MOTOR CONTROL POWER CONTACTS B FOR DIRECT CONTROL OF LINE SHUNT RELAY FROM POWER SWITCH OMIT CONNECTION MARKED (X) AT C36 - C37 AND ADD CONNECTION MARKED (---) AT C35-C36
9.	SELECTOR MAGNET DRIVER SHOWN CONTROLLED BY POWER SWITCH, FOR CONTINUOUS OPERATION MOVE CONNECTION FROM C31 TO C38.
10.	RECTIFIER SHOWN CONTROLLED BY POWER SWITCH. FOR CONTINUOUS OPERATION, MOVE CONNECTION FROM C35 TO C39.
11.	TERMINALS C1, C2, C3 PLUS LINE SHUNT AND LINE TEST AUX. TERMINALS ARE RESERVED FOR CUSTOMER USE.
12.	FOR R.O. OMIT THE FOLLOWING COMPONENTS OUTLINE WITH MARK (-—-—) A. MARGIN IND. LAMP B. MARGIN IND. CONTACT (IN KEYBOARD) C. SIGNAL BELL ON KEYBOARD D. SIGNAL GENERATOR CONTACTS W/ARC SUPPESSOR (IN KEYBOARD)



4487 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
2	6-26-62	73872
3	9-21-62	74590
4	2-4-63	75857
5	3-1-63	75989
6	3-4-63	76176
7	3-11-63	75994
8	9-24-63	78054
9	11-14-63	78862
10	10-7-65	88785
11	8-24-66	91437
12	1-25-67	92056

SCHEMATIC
WIRING DIAGRAM
MODEL 28
(WALL MOUNT)
WITH FACILITIES
PROVIDED BY ELECT
SERVICE UNIT LESU72
AND ASSOCIATED UNITS

APPROVALS

O AND E	E OF M

ENGINEER

MFGD NO 4487WD

DATE 9-18-61

PO FILE NO 56-30.68AA

DRAWN E.M. CHKD

ENG'R DK APPD

TELETYPE
CORPORATION

4487 WD

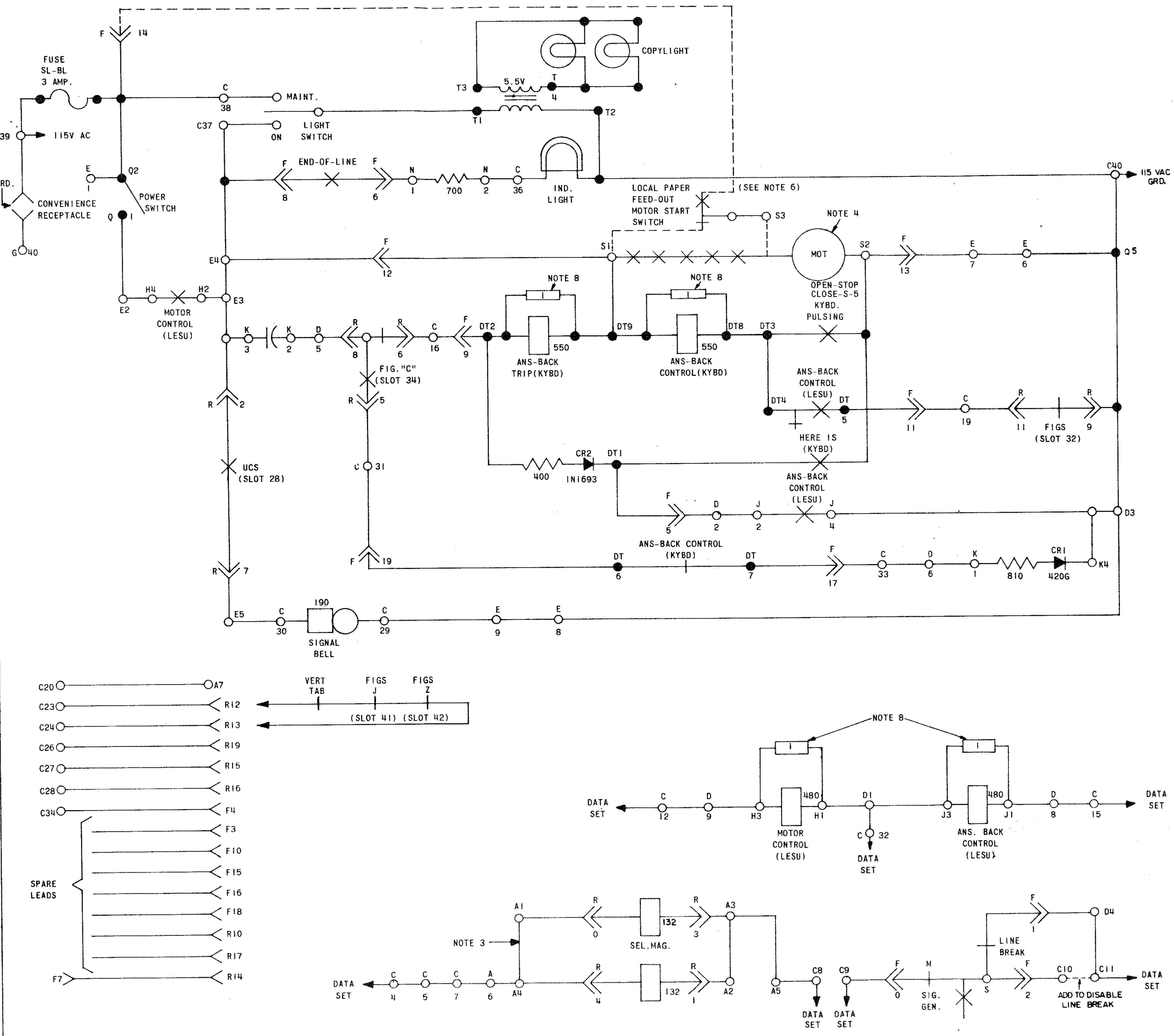
NO.	NOTES
1.	A ● SELECTOR MAGNET TERMINAL BLOCK (LESU) B ● TERMINAL BLOCK (LESU) C ● CABINET TERMINAL BLOCKS (LAC) D ● TERMINAL BLOCK (LESU) E ● TERMINAL BLOCK (LESU) F —≫ KEYBOARD CONNECTOR (LK-LESU) N ● MARGIN IND LAMP RESISTOR (LESU) O ● POWER SWITCH (LESU) R ● TYPING UNIT CONNECTOR (LP-LESU) S ● MOTOR TERMINAL BLOCK (LK) T ● COPY LIGHT TRANSFORMER TERMINALS (LAC) H ● MOTOR CONTROL RELAY (LESU) J ● ANSWER BACK CONTROL RELAY (LESU) K ● CAPACITOR-RESISTOR TERMINALS (LESU) DT ● ANS-BACK CONTROL RELAY (LK) —✕— NORMALLY OPEN CONTACT (MAKE) —+— NORMALLY CLOSED CONTACT (BREAK)
2.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
3.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION FOR .020 AMP. LINE CURRENT, ADD STRAP BETWEEN TERMINALS A-1 & A-2 AND REMOVE CONNECTION BETWEEN TERMINALS A1-A4 & A2-A3
4.	USE SYNCHRONOUS MOTOR ON REGULATED 60~ (± 1%) AC POWER ONLY.
5.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:
6.	FOR LK46 ADD DASHED (----) CONNECTIONS AND OMIT CONNECTIONS MARKED (—X—X—) IN MOTOR POWER CIRCUITS.
7.	SL-BL INDICATES SLOW BLOWING FUSE.
8.	NETWORK VALUES:
9.	RESISTANCE VALUES IN OHMS, INDUCTANCE VALUES IN MICROHENRIES, CAPACITANCE VALUES IN MICROFARADS.

Note 5:

WD NO.	UNITS DIRECTLY OPERABLE WITH LESU80
3236WD	CABINETS LAC204
4901WD	ELECTRICAL SERVICE UNIT LESU80
4906WD	KEYBOARD LK33,46
2900WD	MOTOR UNITS LMU3
4905WD	PAGE TYPING UNIT LP106, AHS
4905WD	PAGE TYPING UNIT LP107, AHU

Note 8:

─[I]─	─\/\/\/─ ─┤├─	
153631	470	0.11 uF



4900 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
2	2-23-62	72467
3	4-3-62	72972
4	7-31-63	77270
5	11-14-63	78849

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
PAGE PRINTER SET
WITH FACILITIES
PROVIDED BY
ELECTRIC SERVICE UNIT
LESU80
DIAL TWX STATION

APPROVALS

D AND R	E OF M
GAH	

E-NUMBER

PROD. NO. 4900WD

DATE 1-19-62

P.D. FILE NO. 5-A100,AA

DRAWN T.F.G.	**CHKD.** R.H.H.
ENGD. T.D.C.	**APPD.** T.I.P.

TELETYPE
CORPORATION

4900 WD

NO.	NOTES:
1.	WIRING LEGEND: DISTANT TERMINATING AREA DISTANT TERMINAL DESIGNATION A-1-W BL WIRE COLOR CODE
2.	COLOR CODE BK - BLACK G - GREEN BR BROWN BL BLUE R RED P PURPLE O ORANGE W WHITE Y YELLOW S SLATE * 18 GA WIRE
3.	UNIT WIRED FOR 115 VOLTS, 60 CYCLE AC POWER IN PUT ONLY.
4.	PLUGS VIEWED FROM SOLDER TERMINAL END.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION REMOVE AND ADD CONNECTIONS AS FOLLOWS.
6.	THE SPARE LEADS FROM THE KEYBOARD AND TYPING UNIT CONNECTOR ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT RESPECTIVELY
7.	STRAP TERMINALS C10 TO C11 TO DISABLE LINE BREAK SWITCH.
8	TERMINALS C1, C2, C13, C14, C20, C25, A7 ARE RESERVED FOR 101A DATA SET USE.

Note 5:

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020 AMP.	A1-A4, A2-A3	A1-A2

PLACE TWO STRAPS IN PARALLEL

FOR SCHEMATIC SEE 4900WD

4901 WD

REVISIONS		
ISSUE	DATE	AUTH NO.
A	2-23-62	72467
B	4-5-62	72972

28N

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 80

APPROVALS	
D AND R	E OF M

E NUMBER
PROD. NO. 4901 WD
DATE: 1-9-62
P.D. FILE NO. 5-A100 AA
DRAWN E.M. CHKD.
ENGD. T.D.C. APPD.

TELETYPE
CORPORATION

4901WD

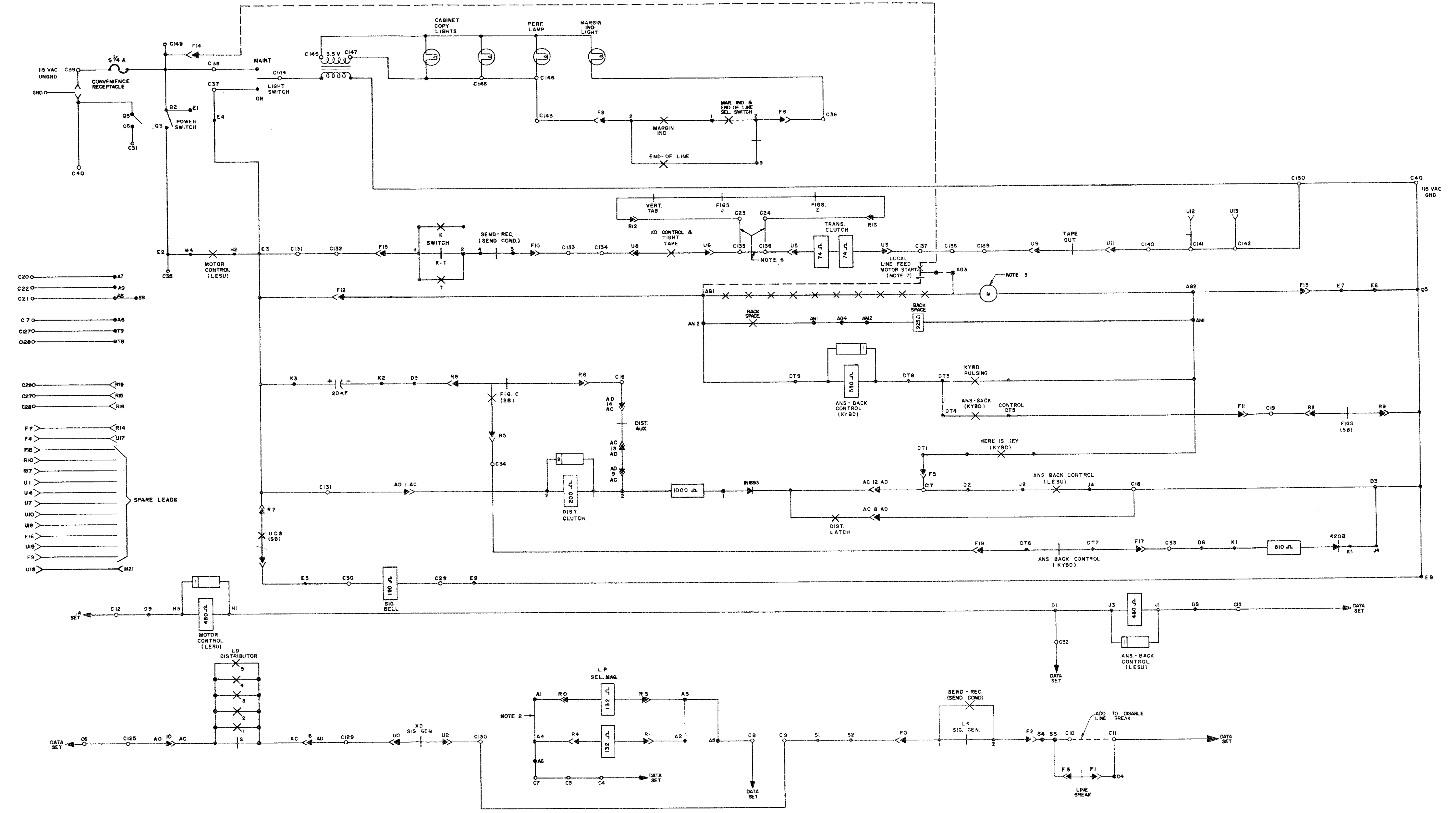
6283-C

R-28 21½ ,, 10¾

NO.	NOTES
	LEGEND: A ● SELECTOR MAGNET TERMINAL BLOCK (LESU) C ○ CABINET TERMINAL BLOCKS (LAAC) D ● TERMINAL BLOCK (LESU) E ● TERMINAL BLOCK (LESU) F ≫ KEYBOARD CONNECTOR (LAK-LESU) N ● MARGIN IND. LAMP RESISTOR (LESU) Q ● POWER SWITCH (LESU) R ≫ TYPING UNIT CONNECTOR (LP-LESU) S ● TERMINAL BLOCK (LESU) T ● TERMINAL BLOCK (LESU) H ● MOTOR CONTROL RELAY (LESU) J ● ANSWER BACK CONTROL RELAY (LESU) K ● CAPACITOR-RESISTOR TERMINALS (LESU) DT ● ANS-BACK CONTROL RELAY (LAK) —✕— NORMALLY OPEN CONTACT (MAKE) —┼— NORMALLY CLOSED CONTACT (BREAK) Ω RESISTANCE VALUES IN OHMS μH INDUCTANCE VALUES IN MICROHENRIES μF CAPACITANCE VALUES IN MICROFARADS —[1]— 185A NETWORK —[2]— 186A NETWORK U ≫ TRANSMITTER DISTRIBUTOR CONNECTOR (LXD-LESU) AD AC ≫ DISTRIBUTOR CONNECTOR (LD) ● AG MOTOR TERMINAL BLOCK (LAK) AM, AN ● BACK SPACE (LAK)
2.	CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD STRAP BETWEEN TERMINALS A1 & A2 AND REMOVE CONNECTION BETWEEN TERMINALS A1-A4 & A2-A3.
3.	USE SYNCHRONOUS MOTOR ON REGULATED 60 ∿ (± 1%) AC. POWER ONLY.
4.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:
5.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
6.	WHEN LXD5 OR 18 IS USED WITH LP107, REMOVE THE STRAP BETWEEN TERMINALS C135-C136. ADD TWO 176162 STRAPS, ONE BETWEEN TERMINALS C23-C135 AND ONE BETWEEN C24-C136.
7	FOR LAK 39 — ADD DASHED (— — — —) CONNECTIONS AND OMIT CONNECTIONS MARKED (——X——). IN MOTOR POWER CIRCUITS.

Note 4:

WD NUMBER	UNITS DIRECTLY OPERABLE WITH LESU 82
3573WD	TRANSMITTER DISTRIBUTOR LXD18
3264 WD	CABINETS LAAC 236
4910 WD	ELECTRICAL SERVICE UNIT LESU 82
4915 WD	KEYBOARD LAK 29, LAK 39
2900 WD	MOTOR UNITS LMU 12
4905 WD	TYPING UNITS LP 106, 107
4916 WD	TRANSMITTER DISTRIBUTOR BASE LCXB17



4909WD		
REVISIONS		
ISSUE	DATE	AUTH. NO.
A	8-23-62	74329
B	11-1-62	74978
C	7-31-63	77270
D	2-11-64	79916

SCHEMATIC
WIRING DIAGRAM
MODEL 28 ASR
SET WITH FACILITIES
PROVIDED BY
LESU 82
DIAL TWX STATION

APPROVALS	
D AND B	E OF M
E-NUMBER	
PROD. NO. 4909 WD	
DATE: 1-16-62	
PD FILE NO. 5-A100AA	
DRAWN M.K.	CHKD.
ENGD. T.D.C.	APPD.

TELETYPE
CORPORATION

4909WD

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

ISSUE CONTROL RECORD

SHEET NO.	ISSUE 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	X	X	X	X	X													
2	X	X	X	X	X													

4910 WD

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
— 1	4-7-66	90222

ISSUE CONTROL
SHEET 1 OF 1

ACTUAL
WIRING DIAGRAM
FOR MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 82

WD NUMBER 4910 WD	
DRAWN DGS	CHKD.
ENGD. TDC	APPD.

TELETYPE
CORPORATION

4910 WD

TC 482 (1-66)

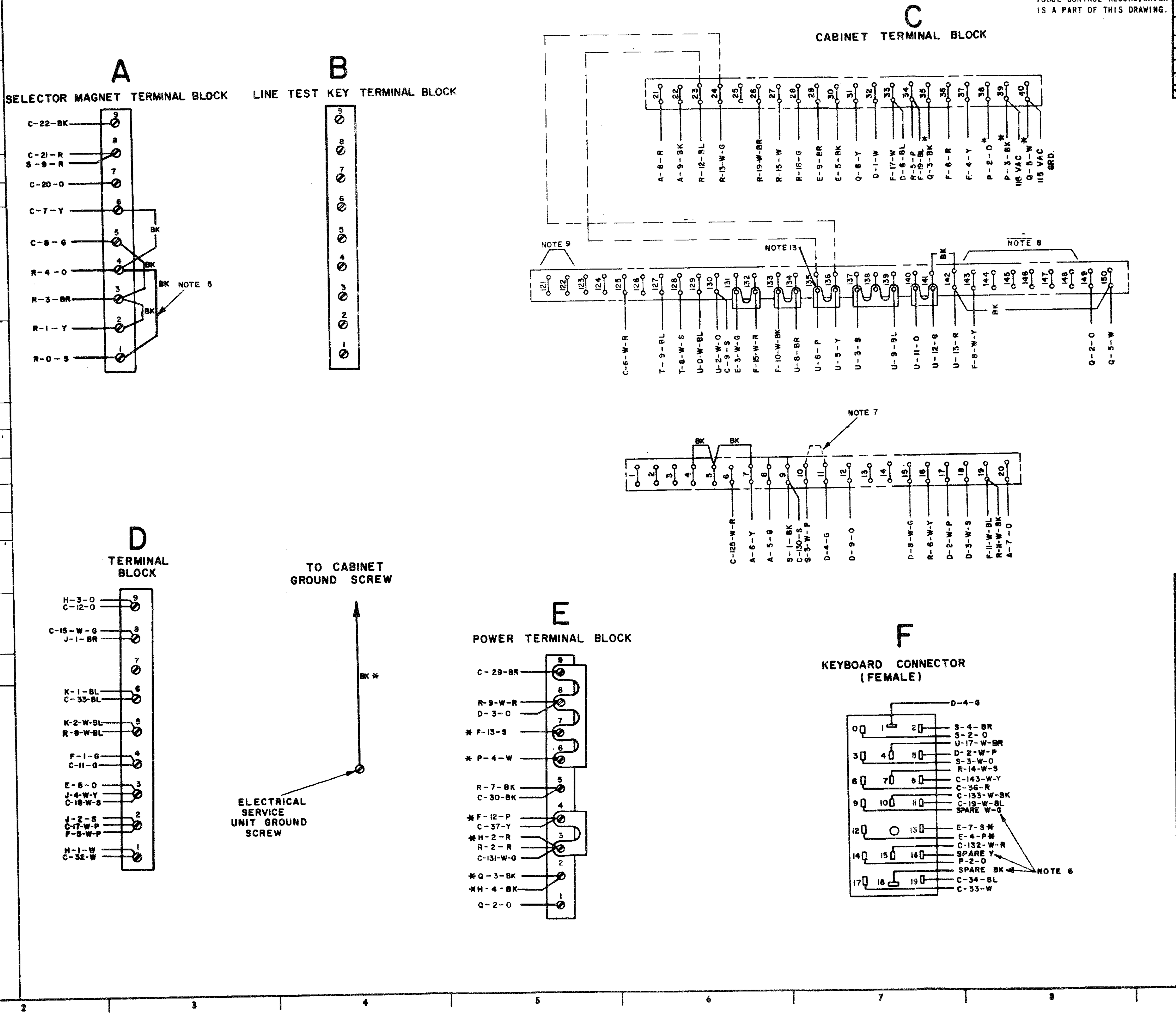
SEE R&D ROUTINE #5
FOR USE OF THIS FORM

NO.	NOTES
1.	WIRING LEGEND: —DISTANT TERMINATING AREA —DISTANT TERMINATING DESIGNATION A-1-W-BL 153631 NETWORK —WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK G - GREEN BR - BROWN BL - BLUE R - RED P - PURPLE O - ORANGE W - WHITE Y - YELLOW S - SLATE * DENOTES 18 GA.
3.	UNIT WIRED FOR 115 VOLTS, 50-60 CYCLE AC POWER INPUT ONLY.
4.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION, REMOVE AND ADD CONNECTIONS AS FOLLOWS:
6.	THE SPARE LEADS FROM THE KEYBOARD AND TRANSMITTER DISTRIBUTOR UNITS CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT END OF ELECTRICAL SERVICE UNIT. THE SPARE LEADS FROM THE TYPING UNIT PLUG ARE TERMINATED IN THE LEFT END OF THE ELECTRICAL SERVICE UNIT.
7.	ADD STRAP BETWEEN C-10 AND C-11, IF SIGNAL LINE BREAK SWITCH IS NOT USED.
8.	TERMINALS C-143 AND C-148 RESERVED FOR CABINET LAMP OPERATION.
9.	TERMINALS C-121 AND C-122 RESERVED FOR PERFORATOR LOW TAPE SWITCH.
10.	CONTACTS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITION.
11.	TERMINALS C1, C2, C13, C14, C20, C25 AND A7 RESERVED FOR 101A DATA SET USE.
12.	ASSOCIATED CABLE ASSEMBLIES: 165689 LESU CABLE 165652 MOTOR CONTROL AND ANSWER-BACK CABLE
13.	WHEN LXD5 OR 18 IS USED WITH LP107, REMOVE THE STRAP BETWEEN TERMINALS C135 AND C136. ADD TWO 176162 STRAPS, ONE BETWEEN TERMINALS C23 AND C135, AND ONE BETWEEN C24 AND C136.
14.	FOR SCHEMATIC WIRING DIAGRAM, SEE 4909WD.

Table for note 5:

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020 AMP.	A1-A4, A2-A3	A1-A2 -✱-

-✱- PLACE TWO STRAPS IN PARALLEL.



NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

4910 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
~~A~~	6-8-62	73664
~~B~~ 3	8-23-62	74329
~~C~~ 4	11-1-62	74978
~~D~~ 5	2-11-64	79910
6	4-7-66	90222

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.
SHEET 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL SERVICE UNIT
LESU82

APPROVALS

D AND R	E OF M
------	------

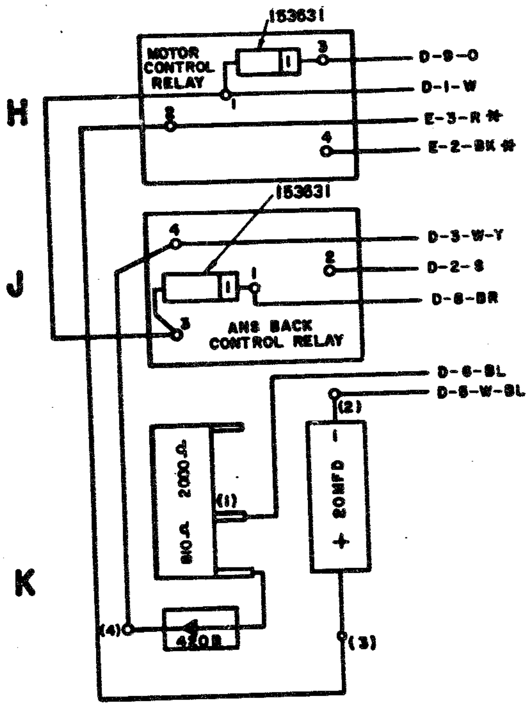
E-NUMBER
PROD. NO. 4910WD
DATE 11-14-61
P.D. FILE NO. 5-A100AA
DRAWN M.K. CHKD.
ENGD. T.D.C. APPD.

TELETYPE
CORPORATION

4910 WD

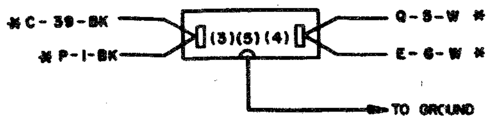
SEE SHEET 1 FOR NOTES.

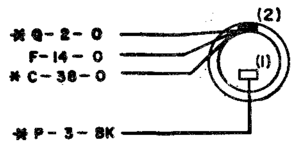
MOTOR CONTROL & ANSWER BACK RELAYS



P

CONVENIENCE RECEPTACLE

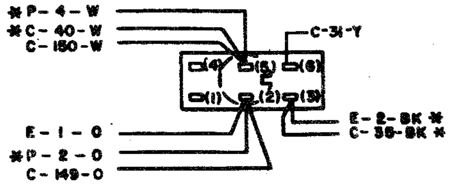


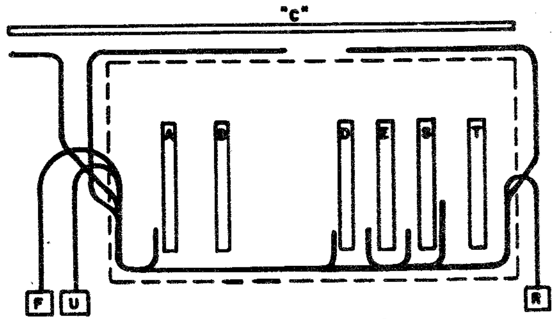


FUSE SOCKET

Q

POWER SWITCH

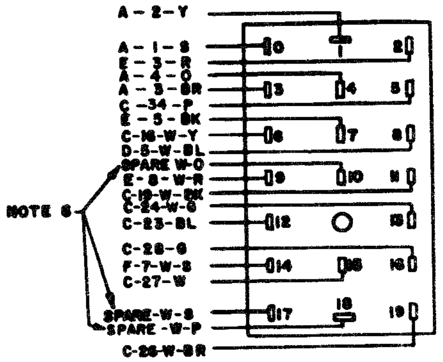




CABLE ROUTING
(BOTTOM VIEW)

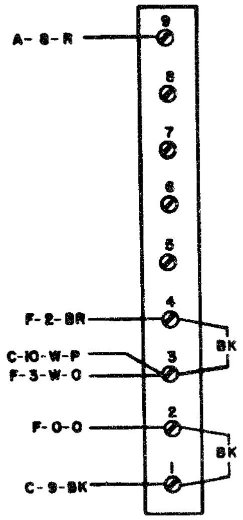
R

TYPING UNIT CONNECTOR (FEMALE)



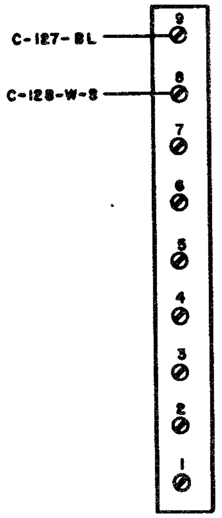
S

SLOW RELEASE RELAY TERMINAL BLOCK



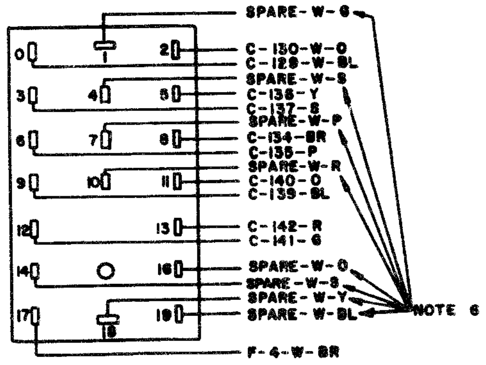
T

SLOW RELEASE TEST KEY TERMINAL BLOCK



U

TRANSMITTER DISTRIBUTOR CONNECTOR (FEMALE)



NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS PART OF THIS W.D.

4910 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
~~A~~ 2	6-8-62	73664
~~B~~ 3	8-23-62	74329
~~C~~ 4	11-1-62	74978
~~D~~ 5	2-11-64	79910
6	4-7-66	90222

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL SERVICE UNIT
LESU82

APPROVALS

D AND R	E OF M
-------	-------

E-NUMBER
PROD. NO. 4910WD
DATE 11-14-61
P.D. FILE NO. 5-A100AA
DRAWN M.K. CHKD.
ENGD. T.D.C. APPD.

TELETYPE
CORPORATION

4910 WD

NO.	NOTES:
1.	WIRING LEGEND: A-1-W BL DISTANT TERMINATING AREA DISTANT TERMINAL DESIGNATION WIRE COLOR CODE
2.	COLOR CODE BK – BLACK G – GREEN BR BROWN BL BLUE R RED P PURPLE O ORANGE W WHITE Y YELLOW S SLATE * 18 GA. WIRE
3.	UNIT WIRED FOR 48 VOLTS DC POWER INPUT ONLY.
4.	PLUGS VIEWED FROM SOLDER TERMINAL END.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION REMOVE AND ADD CONNECTIONS AS FOLLOWS.
6.	THE SPARE LEADS FROM THE KEYBOARD AND TYPING UNIT CONNECTORS ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT RESPECTIVELY
7	STRAP TERMINALS C10 TO C11 TO DISABLE LINE BREAK SWITCH.

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020AMP.	A1-A4, A2-A3	A1-A2

PLACE TWO STRAPS IN PARALLEL

FOR SCHE[illegible] SEE 4912 WD

4911 WD

REVISIONS

ISSUE	DATE	AUTH NO.
A	2-23-62	72467
B	5-15-62	73437

28R

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 86

APPROVALS

D AND R	E OF M

E-NUMBER
PROD. NO. 4911 WD
DATE: 11-30-61
P.D. FILE NO. 5-A100 AA
DRAWN M.K. CHKD.
ENGD. W.T.C. APPD.

TELETYPE
CORPORATION

4911 WD

NO. NOTES

LEGEND:

A ● SELECTOR MAGNET TERMINAL BLOCK (LESU)
B ● TERMINAL BLOCK (LESU)
C ○ CABINET TERMINAL BLOCKS (LAC)
D ● TERMINAL BLOCK (LESU)
E ● TERMINAL BLOCK (LESU)
F ⇾> KEYBOARD CONNECTOR (LK-LESU)
N ● MARGIN IND. LAMP RESISTOR (LESU)
Q ● POWER SWITCH (LESU)
R ⇾> TYPING UNIT CONNECTOR (LP-LESU)
S ● MOTOR TERMINAL BLOCK (LK)
T ● COPY LIGHT TRANSFORMER TERMINALS (LAC)
H ● MOTOR CONTROL RELAY (LESU)
J ● ANSWER BACK CONTROL RELAY (LESU)
K ● CAPACITOR-RESISTOR TERMINALS (LESU)
—✕— NORMALLY OPEN CONTACT (MAKE)
—┼— NORMALLY CLOSED CONTACT (BREAK)
(Ω) RESISTANCE VALUES IN OHMS
(μH) INDUCTANCE VALUES IN MICROHENRIES
(μF) CAPACITANCE VALUES IN MICROFARADS
—▯— 185A NETWORK

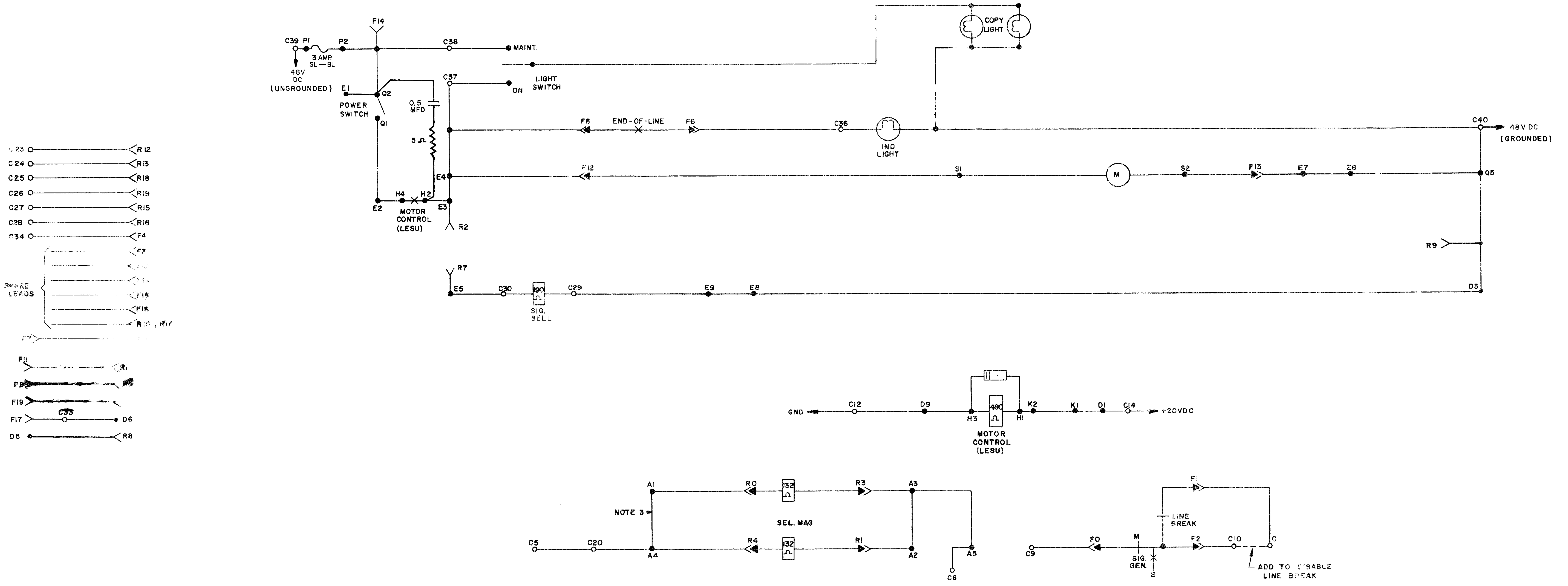
2. ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.

3. CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD STRAP BETWEEN TERMINALS A1 & A2 AND REMOVE CONNECTION BETWEEN TERMINALS A1 - A4 & A2 A3

4. USE SERIES GOVERNED MOTOR ON 48V DC POWER ONLY.

5. FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE

WD NUMBER	UNITS DIRECTLY OPERABLE WITH LESU 86
4917 WD	CABINETS LAC 219
4911 WD	ELECTRICAL SERVICE UNIT LESU 86
2928 WD	KEYBOARD LK 32
2900 WD	MOTOR UNITS LMU 29
4905 WD	PAGE TYPING UNITS LP106, AHR



4912 WD

REVISIONS		
ISSUE	DATE	AUTH NO.
A	2-23-62	72467
B	5-15-62	73437
C	11-14-63	78849

28R

SCHEMATIC
WIRING DIAGRAM
MODEL 28
PAGE PRINTER SET
WITH FACILITIES
PROVIDED BY
ELEC. SERVICE UNIT
LESU 86
DIAL TWX CENTER

APPROVALS
D AND R E OF M

E-NUMBER
PROD NO. 4912 WD
DATE: 12-1-61
PD FILE NO. 5 A100AA
DRAWN M.K. CHKD.
ENGD. W.T.C. APPD.

TELETYPE
CORPORATION

4912 WD

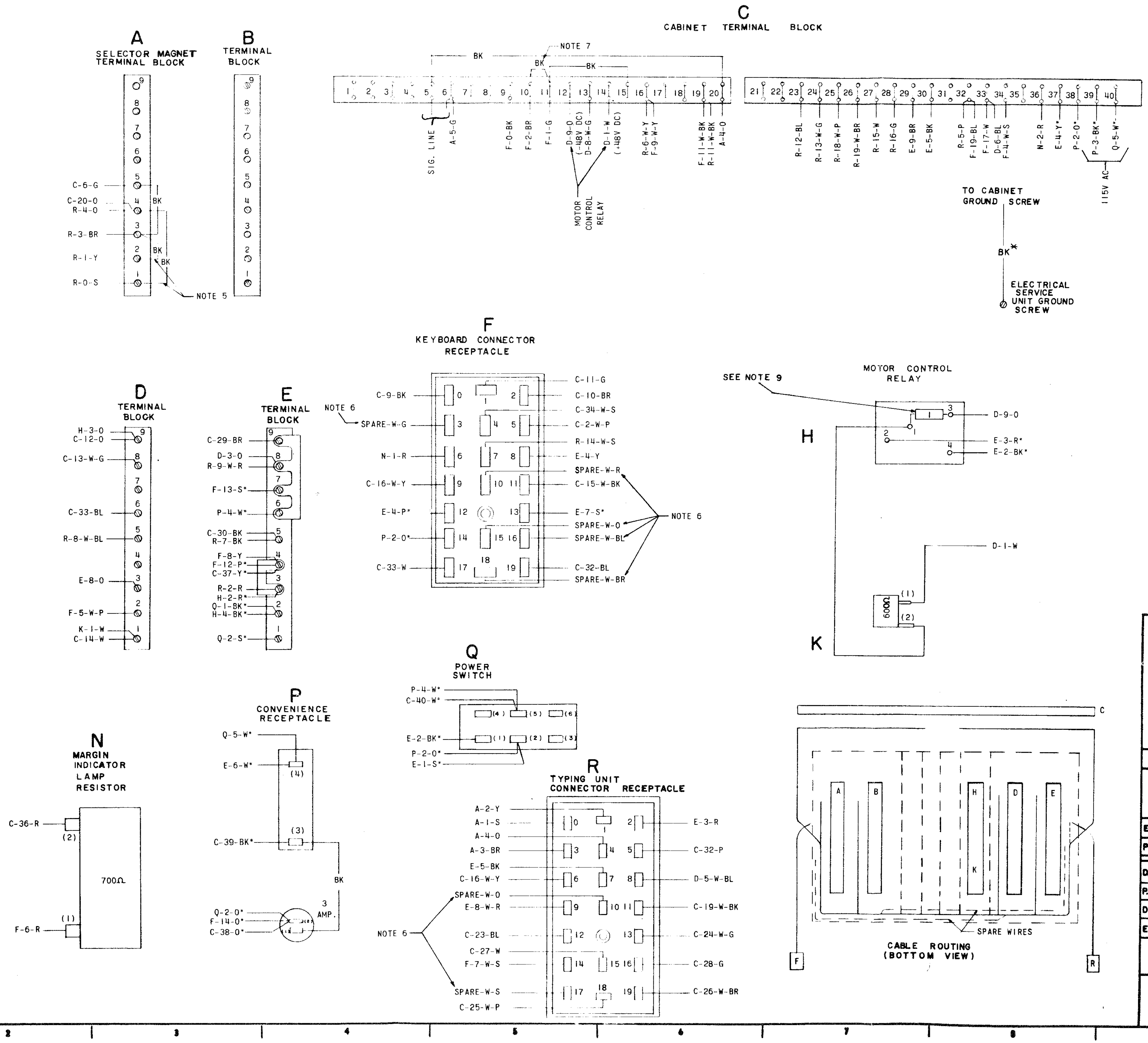
NO.	NOTES
1.	WIRING LEGEND: DISTANT TERMINATING AREA DISTANT TERMINATING DESIGNATION A-1-W-BL — WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK G - GREEN BR - BROWN BL - BLUE R - RED P - PURPLE O - ORANGE W - WHITE Y - YELLOW S - SLATE * 18 GA. WIRE
3.	UNIT WIRED FOR 115 VOLTS, 60 CYCLE AC POWER INPUT ONLY.
4.	PLUGS VIEWED FROM SOLDER TERMINAL END.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION, REMOVE AND ADD CONNECTIONS AS FOLLOWS:
6.	THE SPARE LEADS FROM THE KEYBOARD AND TYPING UNIT CONNECTORS ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT, RESPECTIVELY.
7.	STRAP TERMINALS C10 TO C11 TO DISABLE LINE BREAK SWITCH.
8.	FOR SCHEMATIC, SEE 4914WD.
9.	NETWORK VALUES

Note 5 (continued):

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020 AMP.	A1-A4, A2-A3	A1-A2

PLACE TWO STRAPS IN PARALLEL

Note 9: 153631 — 470Ω — 0.11 μF



4913 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
A	7-31-62	74071

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU87

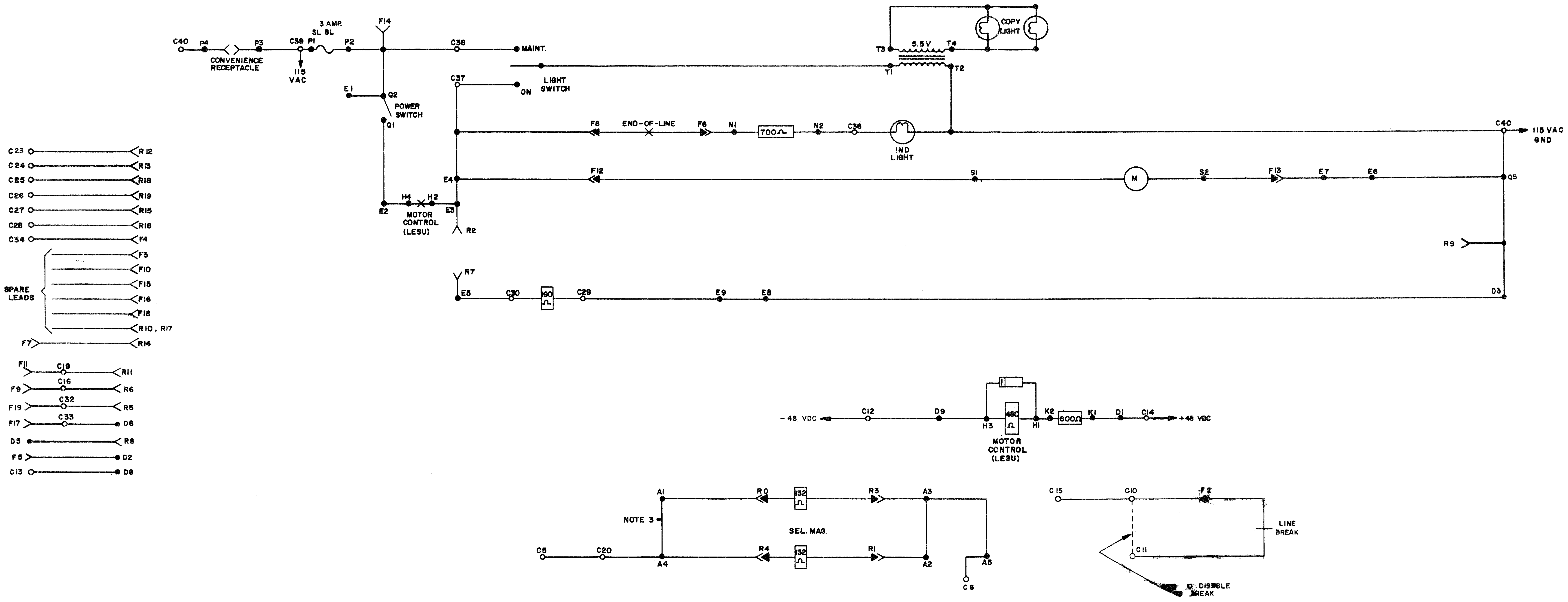
APPROVALS	
D AND R F.L.	E OF M
E-NUMBER	
PROD. NO. 4913WD	
DATE 12-1-61	
P.D. FILE NO. 5-A.100.AA	
DRAWN M.K.	CHKD.
ENGD. W.T.C.	APPD. D.E.H.

TELETYPE
CORPORATION

4913 WD

NO.	NOTES
1.	LEGEND: A ● SELECTOR MAGNET TERMINAL BLOCK (LESU) B ● TERMINAL BLOCK (LESU) C ○ CABINET TERMINAL BLOCKS (LAC) D ● TERMINAL BLOCK (LESU) E ● TERMINAL BLOCK (LESU) F ➤ KEYBOARD CONNECTOR (LK-LESU) N ● MARGIN IND. LAMP RESISTOR (LESU) Q ● POWER SWITCH (LESU) R ➤ TYPING UNIT CONNECTOR (LP-LESU) S ● MOTOR TERMINAL BLOCK (LK) T ● COPY LIGHT TRANSFORMER TERMINALS (LAC) H ● MOTOR CONTROL RELAY (LESU) J ● ANSWER BACK CONTROL RELAY (LESU) K ● CAPACITOR-RESISTOR TERMINALS (LESU) —✕— NORMALLY OPEN CONTACT (MAKE) —┼— NORMALLY CLOSED CONTACT (BREAK) (Ω) RESISTANCE VALUES IN OHMS (μH) INDUCTANCE VALUES IN MICROHENRIES (μF) CAPACITANCE VALUES IN MICROFARADS -▯- 185A NETWORK
2.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
3.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. LINE CURRENT, ADD STRAP BETWEEN TERMINALS A1 & A2 AND REMOVE CONNECTION BETWEEN TERMINALS A1 - A4 & A2 - A3
4.	USE SYNCHRONOUS MOTOR ON REGULATED 60 ∿ (± 1%) A.C. POWER ONLY.
5.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE

WD NUMBER	UNITS DIRECTLY OPERABLE WITH LESU 87
3236 WD	CABINETS LAC 204
4913 WD	ELECTRICAL SERVICE UNIT LESU 87
4906 WD	KEYBOARD LK 33
2900 WD	MOTOR UNITS LMU 3
4905 WD	PAGE TYPING UNITS LP 106, 107



4914 WD

REVISIONS		
ISSUE	DATE	AUTH NO.
A	7-31-62	74071
B	11-14-63	78849

28 S

SCHEMATIC
WIRING DIAGRAM
MODEL 28
PAGE PRINTER SET
WITH FACILITIES
PROVIDED BY
ELEC. SERVICE UNIT
LESU 87
DIAL TWX CENTER

APPROVALS	
D AND R	E OF M

E-NUMBER

PROD NO. 4914 WD

DATE: 11-17-61

PD FILE NO. 5-A100AA

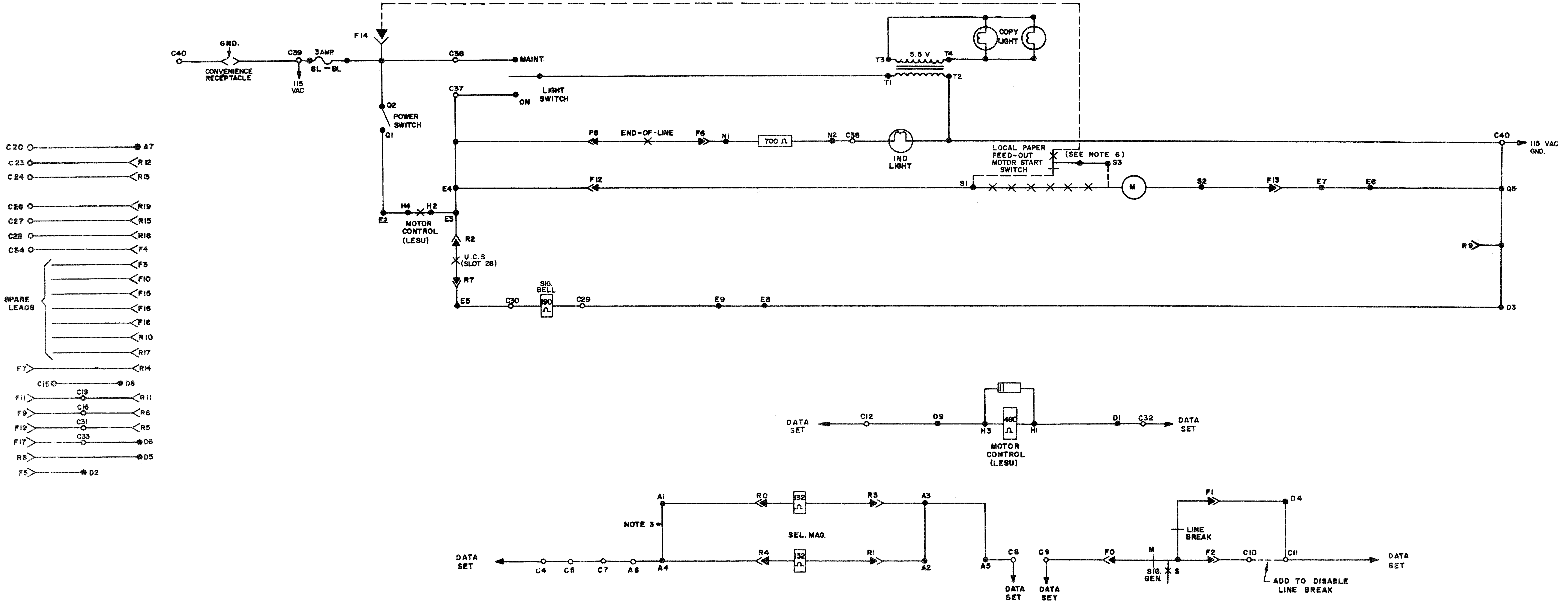
DRAWN E.E.	CHKD.
ENGD. T.D.C.	APPD.

TELETYPE
CORPORATION

4914 WD

NO.	NOTES
1.	LEGEND: A ● SELECTOR MAGNET TERMINAL BLOCK(LESU) B ● TERMINAL BLOCK (LESU) C ○ CABINET TERMINAL BLOCKS (LAC) D ● TERMINAL BLOCK (LESU) E ● TERMINAL BLOCK (LESU) F ≫ KEYBOARD CONNECTOR (LK-LESU) N ● MARGIN IND. LAMP RESISTOR (LESU) Q ● POWER SWITCH (LESU) R ≫ TYPING UNIT CONNECTOR (LP-LESU) S ● MOTOR TERMINAL BLOCK (LK) T ● COPY LIGHT TRANSFORMER TERMINALS(LAC) H ● MOTOR CONTROL RELAY (LESU) —✕— NORMALLY OPEN CONTACT (MAKE) —┼— NORMALLY CLOSED CONTACT (BREAK) Ω RESISTANCE VALUES IN OHMS μH INDUCTANCE VALUES IN MICROHENRIES μF CAPACITANCE VALUES IN MICROFARADS 185A NETWORK
2.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
3.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. LINE CURRENT, ADD STRAP BETWEEN TERMINALS A1 & A2 AND REMOVE CONNECTION BETWEEN TERMINALS A1 - A4 & A2 - A3
4.	USE SYNCHRONOUS MOTOR ON REGULATED 60 ∿ (± 1%) A.C. POWER ONLY.
5.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE
6	FOR LK 47 ADD DASHED (— — — —) CONNECTIONS AND OMIT CONNECTIONS MARKED (——X——X——) IN MOTOR POWER CIRCUITS.

WD NUMBER	UNITS DIRECTLY OPERABLE WITH LESU 81
3236 WD	CABINETS LAC 204
4919 WD	ELECTRICAL SERVICE UNIT LESU 81
4906 WD	KEYBOARD LK 34, 47
2900 WD	MOTOR UNITS LMU 3
4905 WD	PAGE TYPING UNITS LP 106, 107



4918WD

REVISIONS		
ISSUE	DATE	AUTH NO.
A	1-23-62	72467
B	4-3-62	72572
C	7-31-63	77270
D	11-14-63	78849

28N-1

SCHEMATIC
WIRING DIAGRAM
MODEL 28
PAGE PRINTER SET
WITH FACILITIES
PROVIDED BY
ELEC. SERVICE UNIT
LESU 81
DIAL TWX STATION

APPROVALS	
D AND B	E OF M
E-NUMBER	
PROD NO. 4918 WD	
DATE: 1-10-62	
PD FILE NO. 5-A100AA	
DRAWN JJK	CHKD.
ENGD. TDC	APPD.

TELETYPE
CORPORATION

4918WD

NOTES:

WIRING LEGEND:

A-1-W BL
- DISTANT TERMINATING AREA
- DISTANT TERMINAL DESIGNATION
- WIRE COLOR CODE

COLOR CODE

BK	BLACK	G	GREEN
BR	BROWN	BL	BLUE
R	RED	P	PURPLE
O	ORANGE	W	WHITE
Y	YELLOW	S	SLATE
*	18 GA. WIRE		

UNIT WIRED FOR 115 VOLTS 60 CYCLE AC POWER IN PUT ONLY.

PLUGS VIEWED FROM SOLDER TERMINAL END.

CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION REMOVE AND ADD CONNECTIONS AS FOLLOWS.

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020AMP.	A1-A4,A2-A3	A1-A2

PLACE TWO STRAPS IN PARALLEL

THE SPARE LEADS FROM THE KEYBOARD AND TYPING UNIT CONNECTOR ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT RESPECTIVELY

STRAP TERMINALS C10 TO C11 TO DISABLE LINE BREAK SWITCH.

TERMINALS C1, C2, C13, C14, C20, C25, A7 ARE RESERVED FOR 101A DATA SET USE.

4919 WD

REVISIONS

ISSUE	DATE	AUTH NO.
A	2-25-62	72467
B	4-3-62	72972
C	6-8-62	73664

28[illegible]-1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 81

APPROVALS

D AND R	E OF M

E-NUMBER

PROD. NO. 4919 WD

DATE: 1-11-62

P.O. FILE NO. 8-A100.4A

DRAWN JJK CHKD.

ENGD. TDC APPD.

TELETYPE
CORPORATION

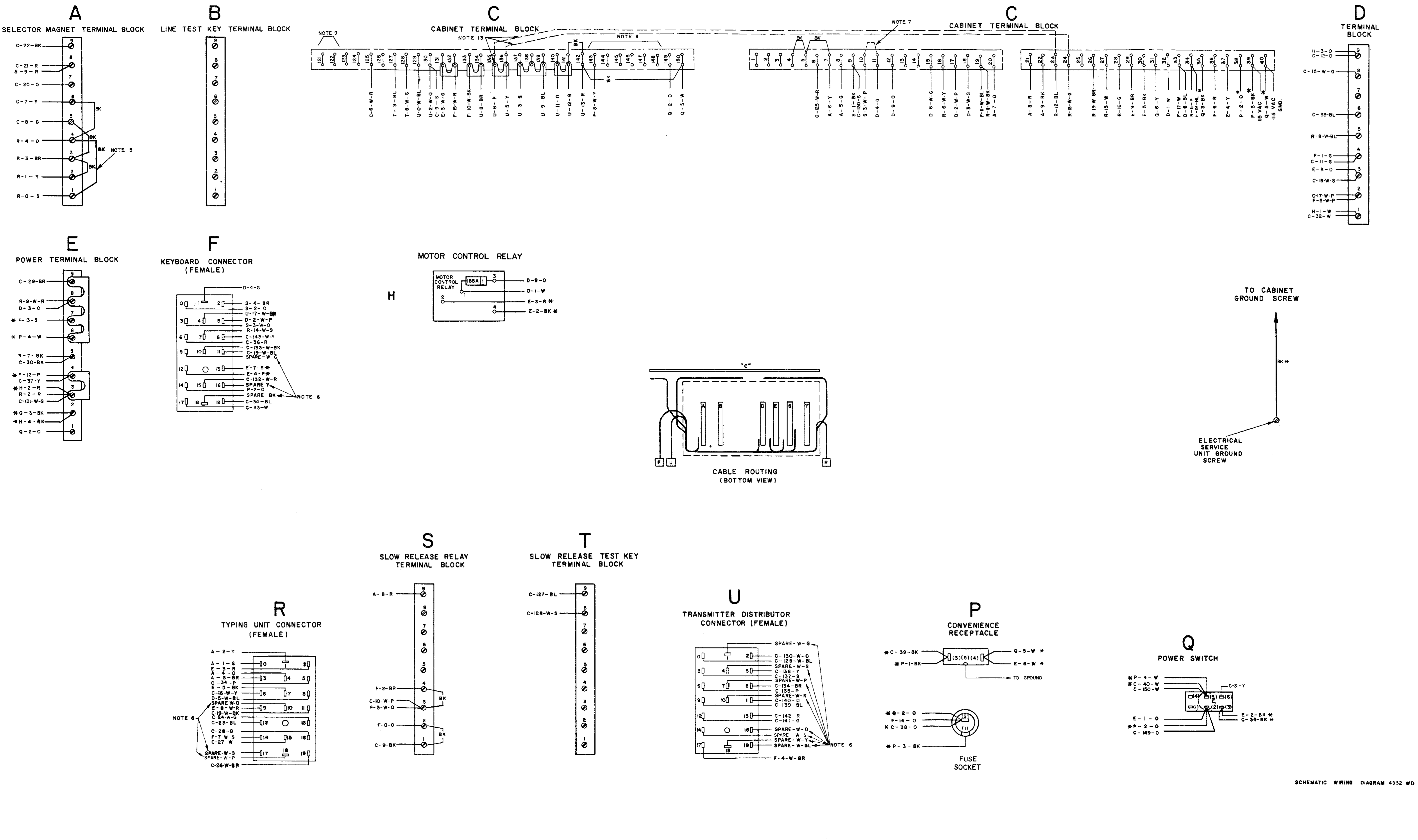
4919 WD

1	WIRING LEGEND: A – 1 – W – BL: A = DISTANT TERMINATING AREA; 1 = DISTANT TERMINAL DESIGNATION; W – BL = WIRE COLOR 185A NETWORK
2	COLOR CODE BK – BLACK BR – BROWN R – RED O – ORANGE Y – YELLOW G – GREEN BL – BLUE P – PURPLE W – WHITE S – SLATE ✱ = 18 GA.
3	UNIT WIRED FOR 115 VOLTS. 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
4	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
5	CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION FOR .020 AMP OPERATION REMOVE AND ADD CONNECTIONS AS FOLLOWS.
6	THE SPARE LEADS FROM THE KEYBOARD AND TRANSMITTER DISTRIBUTOR UNITS CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT END OF ELECTRICAL SERVICE UNIT. THE SPARE LEADS FROM THE TYPING UNIT PLUG ARE TERMINATED IN THE LEFT END OF THE ELECTRICAL SERVICE UNIT.
7	ADD STRAP BETWEEN C-10 & C-11 IF SIGNAL LINE BREAK SWITCH IS NOT USED.
8	TERMINALS C-143 C-148 RESERVED FOR CABINET LAMP OPERATION.
9	TERMINALS C-121 C-122 RESERVED FOR PERFORATOR LOW TAPE SWITCH.
10.	CONTACTS SHOWN IN UNOPERATED OR DEENERGIZED POSITION.
11	TERMINALS C1, C2, C13, C14, C20, C25 & A7 ARE RESERVED FOR 101A DATA SET USE
12	ASSOCIATED CABLE ASSEMBLIES 165689 LESU CABLE 178308 MOTOR CONTROL RELAY CABLE
13.	WHEN LXD5 OR 18 IS USED WITH LP107, REMOVE THE STRAP BETWEEN TERMINALS C135-C136. ADD TWO 162365 STRAPS, ONE BETWEEN TERMINALS C23-C135 AND ONE BETWEEN C24-C136.

Note 5 table:

SIGNAL LINE CURRENT	CONNECTION REMOVED	CONNECTION ADDED
.020 AMP	A1–A4, A2–A3	A1–A2 ✱

✱ PLACE TWO STRAPS IN PARALLEL.


A
SELECTOR MAGNET TERMINAL BLOCK
B
LINE TEST KEY TERMINAL BLOCK
C
CABINET TERMINAL BLOCK
NOTE 9
NOTE 13
NOTE 8
NOTE 7
C
CABINET TERMINAL BLOCK
D
TERMINAL BLOCK
E
POWER TERMINAL BLOCK
F
KEYBOARD CONNECTOR (FEMALE)
NOTE 6
H
MOTOR CONTROL RELAY
185A
NOTE 5
BK
"C"
CABLE ROUTING (BOTTOM VIEW)
TO CABINET GROUND SCREW
ELECTRICAL SERVICE UNIT GROUND SCREW
S
SLOW RELEASE RELAY TERMINAL BLOCK
T
SLOW RELEASE TEST KEY TERMINAL BLOCK
R
TYPING UNIT CONNECTOR (FEMALE)
U
TRANSMITTER DISTRIBUTOR CONNECTOR (FEMALE)
P
CONVENIENCE RECEPTACLE
TO GROUND
FUSE SOCKET
Q
POWER SWITCH
115 VAC
115 VAC GND.

SCHEMATIC WIRING DIAGRAM 4932 WD

4931WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	6-8-62	73664
B	8-23-62	74329
C	11-1-62	74978

APPROVALS	
D AND P	E OF M
E NUMBER	
PROD. NO. 4931WD	

ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 83

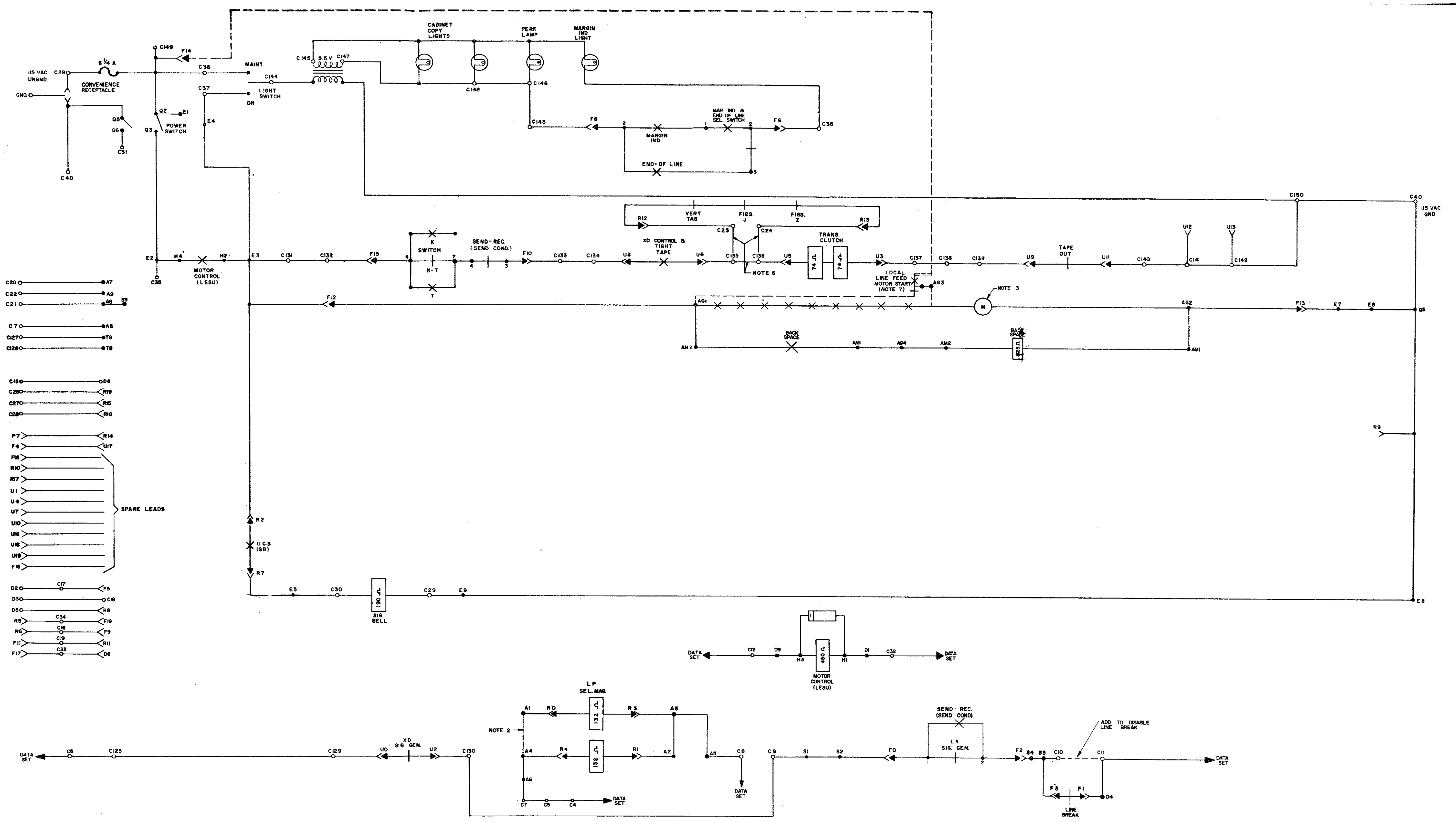
DATE: 1-15-62
P.D. FILE NO. 5-A100AA
DRAWN JJK CHKD
ENGD. WTC APPD

TELETYPE
CORPORATION

4931WD

	NOTES
	LEGEND: A ● SELECTOR MAGNET TERMINAL BLOCK (LESU) C ○ CABINET TERMINAL BLOCKS (LAAC) D ● TERMINAL BLOCK (LESU) E ● TERMINAL BLOCK (LESU) F→ KEYBOARD CONNECTOR (LAK-LESU) N ● MARGIN IND. LAMP RESISTOR (LESU) Q ● POWER SWITCH (LESU) R→ TYPING UNIT CONNECTOR (LP-LESU) S ● TERMINAL BLOCK (LESU) T ● TERMINAL BLOCK (LESU) H ● MOTOR CONTROL RELAY (LESU) AM, AN ● BACK SPACE (LAK) —x— NORMALLY OPEN CONTACT (MAKE) —+— NORMALLY CLOSED CONTACT (BREAK) Ω RESISTANCE VALUES IN OHMS μH INDUCTANCE VALUES IN MICROHENRIES μF CAPACITANCE VALUES IN MICROFARADS —▭— 185A NETWORK U → TRANSMITTER DISTRIBUTOR CONNECTOR (LXD-LESU) ●AG MOTOR TERMINAL BLOCK (LAK)
2.	CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, ADD STRAP BETWEEN TERMINALS A1 & A2 AND REMOVE CONNECTION BETWEEN TERMINALS A1-A4 & A2-A3.
3.	USE SYNCHRONOUS MOTOR ON REGULATED 60 ∿ (±1%) AC. POWER ONLY.
4.	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:
5.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS
6.	WHEN LXD5 OR 18 IS USED WITH LP107, REMOVE THE STRAP BETWEEN TERMINALS C135-C136. ADD TWO 162365 STRAPS, ONE BETWEEN TERMINALS C23-C135 AND ONE BETWEEN TERMINALS C24-C136.
7.	FOR LAK 40 ADD DASHED (- - - -) CONNECTIONS AND OMIT CONNECTIONS MARKED (——X——) IN MOTOR CIRCUITS.

WD NUMBER	UNITS DIRECTLY OPERABLE WITH LESU83
4916 WD	CABINETS LAAC 236
4931 WD	ELECTRICAL SERVICE UNIT LESU83
3673 WD	KEYBOARD LAK 30, 40
2900 WD	MOTOR UNITS LMU 12
4905 WD	TYPING UNITS LP 106, 107
3573 WD	TRANSMITTER DISTRIBUTOR LXD 18



4932 WD		
REVISIONS		
ISSUE	DATE	AUTH NO.
A	8-23-62	74329
B	11-[illegible]-62	74978
C	7-31-63	77270

SCHEMATIC
WIRING DIAGRAM
MODEL 28 ASR
SET WITH FACILITIES
PROVIDED BY
LESU 83
DIAL TWX STATION

APPROVALS	
D AND R	E OF M
E-NUMBER	
PROD. NO. 4932 WD	
DATE: 1-15-62	
PD FILE NO. 5-A100AA	
DRAWN JJK	CHKD.
ENGD. WTC	APPD.

TELETYPE
CORPORATION
4932 WD

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

ISSUE CONTROL RECORD

SHEET NO.	ISSUE																	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	X	X																
2	X																	

2

5928 WD

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
1	4-7-66	90222
2	10-26-67	90222-1-B

ISSUE CONTROL
SHEET 1 OF 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU 95

WD NUMBER 5928 WD	
DRAWN DGS	CHKD.
ENGD. RSP	APPD.

TELETYPE
CORPORATION

5928 WD

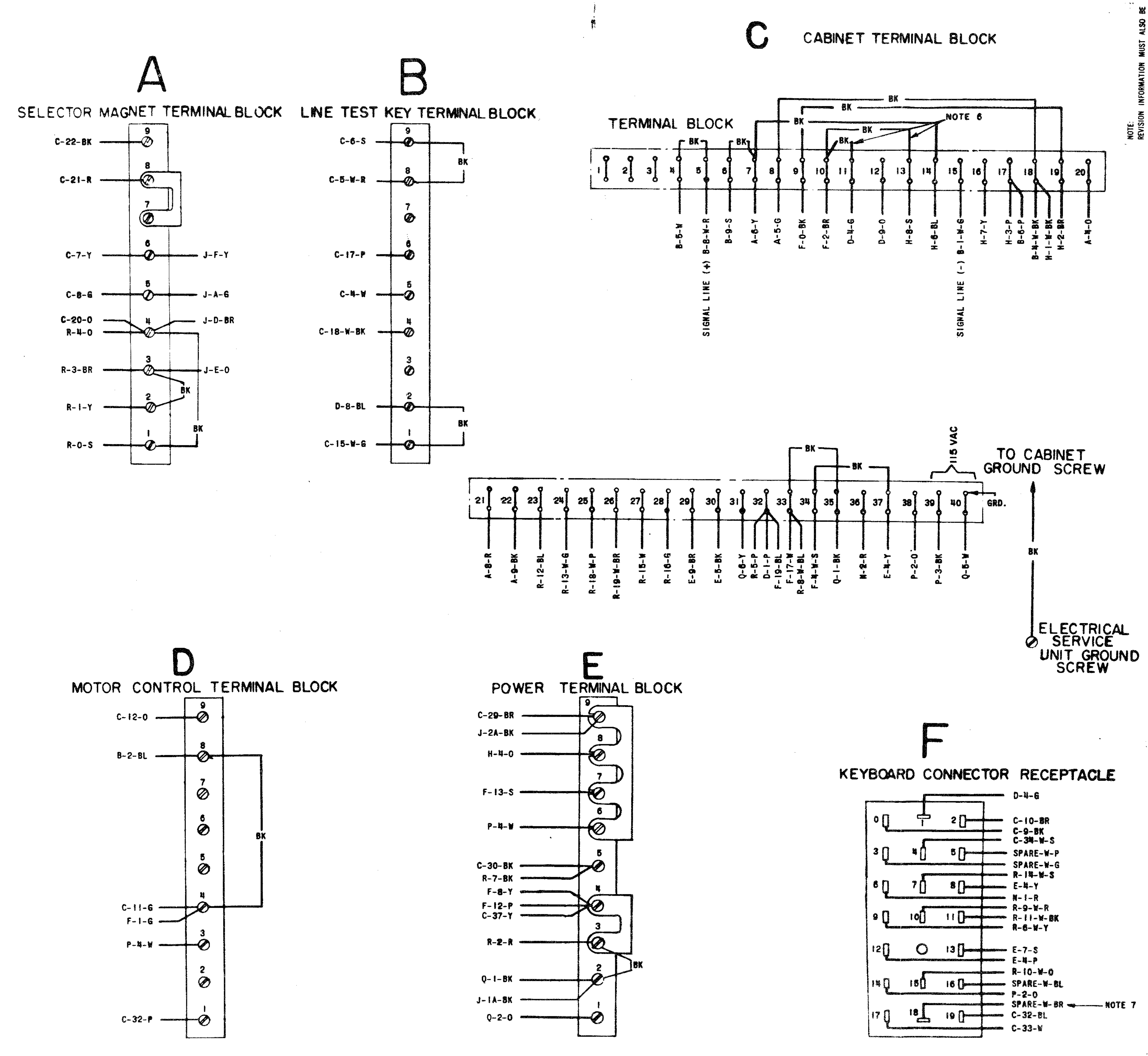
TC 482 (1-66)

SEE R&D ROUTINE #5
FOR USE OF THIS FORM

NO.	NOTES
1.	WIRING LEGEND: —DISTANT TERMINATING AREA —DISTANT TERMINATING DESIGNATION A-1-W-BL —WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK G - GREEN BR - BROWN BL - BROWN R - RED P - PURPLE O - ORANGE W - WHITE Y - YELLOW S - SLATE
3.	UNIT WIRED FOR 115 VOLTS, 50-60 CYCLE A.C. POWER INPUT ONLY.
4.	PLUGS VIEWED FROM SOLDER TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. NEUTRAL OPERATION, REMOVE CONNECTIONS AS SHOWN BELOW:
6.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH. A. FOR KEYBOARD OPERATION, TERMINAL 13 MAY BE CONNECTED TO EITHER TERMINAL C-9, C-10, C-11 OR C-15 TO OBTAIN DESIRED SHUNTING OF THE SIGNAL LINE CIRCUIT. B. WHEN SIGNAL LINE BREAK SWITCH IS NOT USED, CONNECT C-10 TO C-11.
7.	THE SPARE LEADS FROM THE KEYBOARD AND TYPING UNIT CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT, RESPECTIVELY.
8.	FOR SCHEMATIC WIRING DIAGRAM, SEE 5929WD.

Table under note 5:

SIGNAL LINE CURRENT	CONNECTION REMOVED
.020 AMP.	J1 TO J2



NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

5928 WD

REVISIONS.

ISSUE	DATE	AUTH. NO.
2	4-7-66	90222
3	10-26-67	90222-1-B

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D. SHEET 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU95

APPROVALS

D AND R	E OF M
------	------

E-NUMBER

PROD. NO. 5928WD

DATE 9-1-62

P.D. FILE NO. 1-159/158.65AA

DRAWN E.E.	CHKD.
ENGD. R.S.P.	APPD.

TELETYPE
CORPORATION

5928 WD

SEE SHEET 1 FOR NOTES.

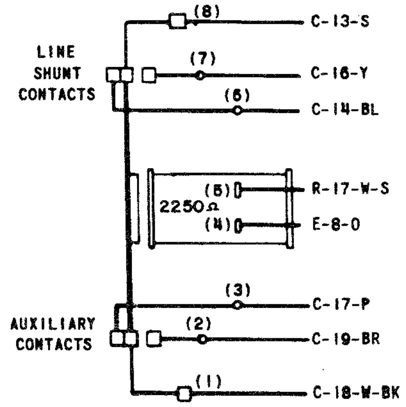
NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

5928 WD

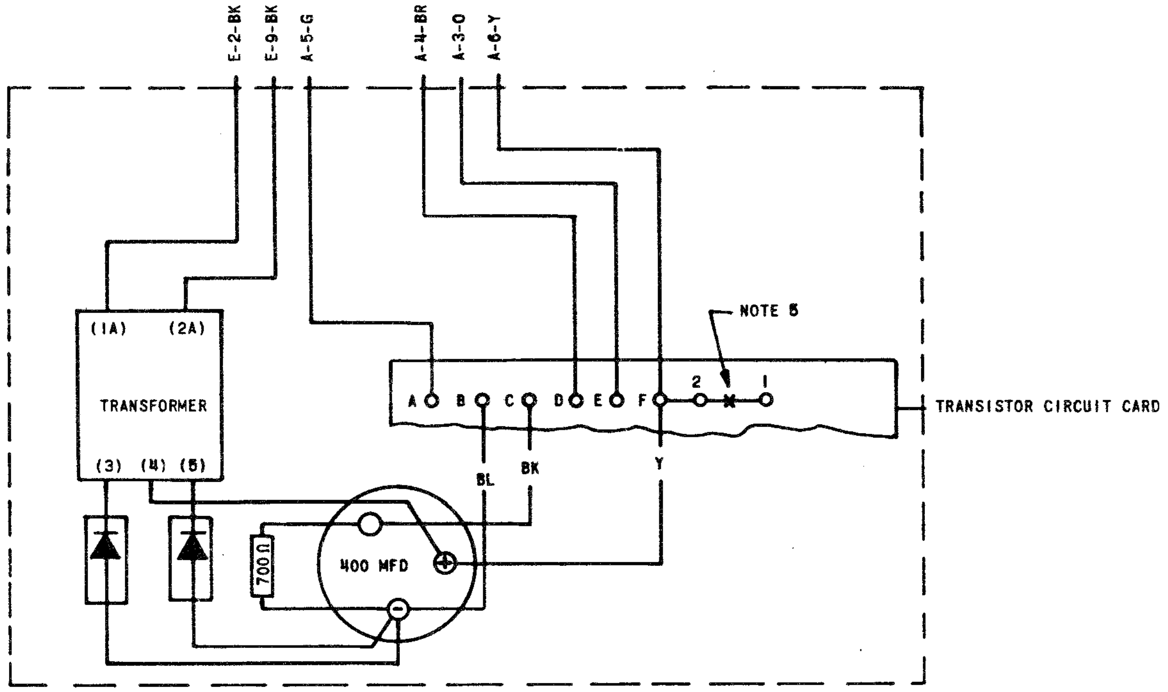
REVISIONS

ISSUE	DATE	AUTH. NO.
2	4-7-66	90222

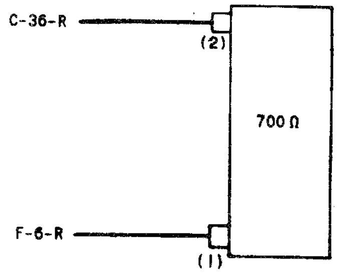
H
LINE SHUNT RELAY



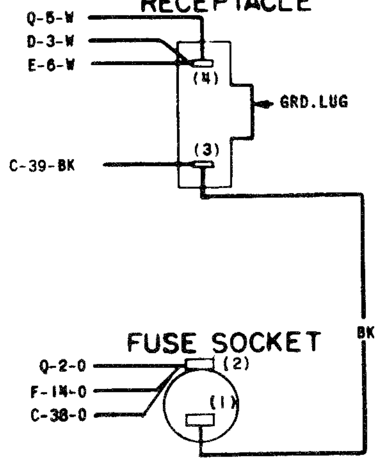
J
TYPING UNIT SELECTOR MAGNET DRIVER



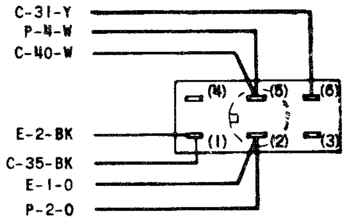
N
MARGIN INDICATOR LAMP RESISTOR



P
CONVENIENCE RECEPTACLE

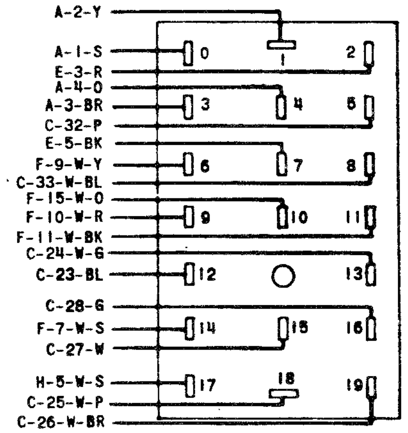


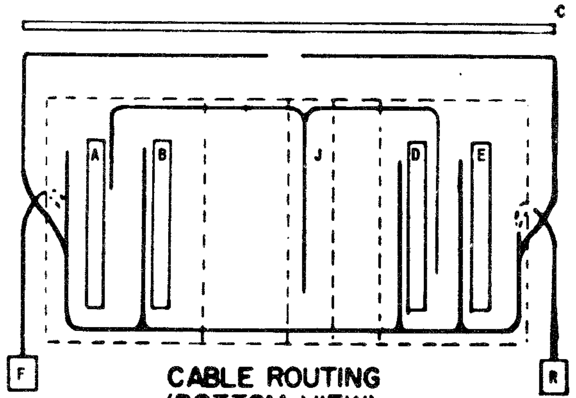
Q



POWER SWITCH

R
TYPING UNIT CONNECTOR RECEPTACLE





CABLE ROUTING (BOTTOM VIEW)

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.
SHEET 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU95

APPROVALS

D AND R	E OF M
------	------

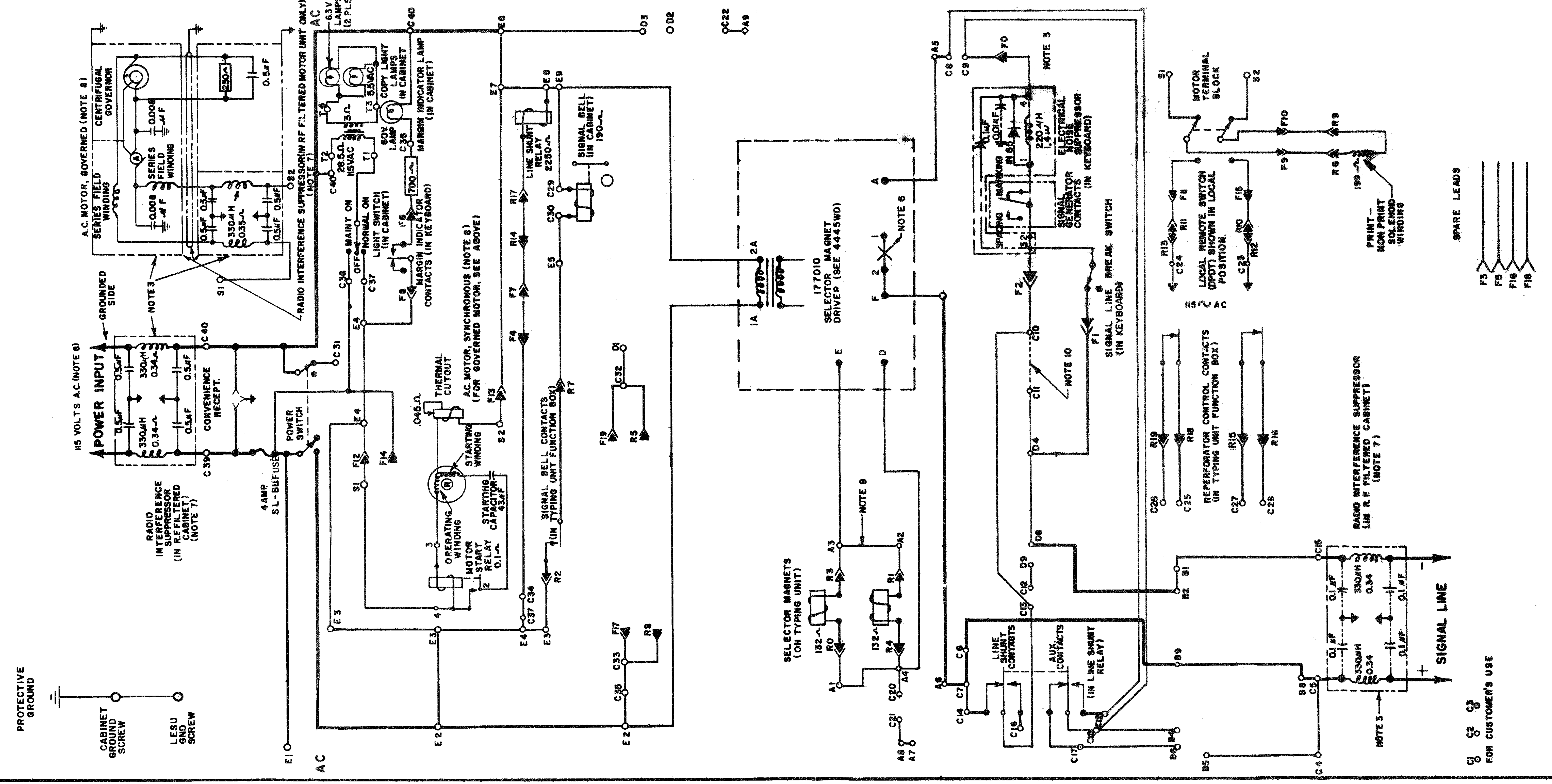
E-NUMBER
PROD. NO. 5928WD
DATE 9-1-62
P.D. FILE NO. 1-159/158.65AA

DRAWN E.E.	CHKD.
ENGD. R.S.P.	APPD.

TELETYPE
CORPORATION

5928 WD

NO	NOTES	NO	NOTES
1	ACTUAL WIRING DIAGRAMS FOR INDIVIDUAL UNITS DIRECTLY OPERABLE WITH LESU95 2883 WD — BASE, RECEIVING ONLY—LB 4 2876 WD — CABINETS—LAC 203, 204, 5928 WD — ELECTRICAL SERVICE UNIT—LESU 95 2928 WD — KEYBOARDS —LK16 2900 WD — MOTOR UNITS —LMU 3,4, 3214 WD — PAGE TYPING UNIT —LP15 4445 WD — SELECTOR MAGNET DRIVER—177010		
2	LEGEND ○ A SELECTOR MAGNET TERMINAL BLOCK (IN LESU). ○ B LINE TEST KEY TERMINAL BLOCK (IN LESU) ○ C CABINET TERMINAL BLOCK. ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU) ○ E POWER TERMINAL BLOCK (IN LESU) ≪ F KEYBOARD CONNECTOR. ≪ R TYPING UNIT CONNECTOR. ○ S MOTOR TERMINAL BLOCK (IN LK)		
3	DOT DASH-------LINES INDICATE FILTERING. SHIELDING AND SUPPRESSION NETWORKS.		
4	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE—ENERGIZED POSITIONS.		
5	a. RESISTANCE VALUES IN OHMS (Ω) b. INDUCTANCE VALUES IN MICROHENRIES (μH) c. CAPACITANCE VALUES IN MICROFARADS (μF)		
6	CIRCUITS SHOWN FOR .060 AMP NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, OMIT CONNECTION MARKED (—✕—) IN SELECTOR MAGNET DRIVER CIRCUIT.		
7	a. USE POWER AND SIGNAL LINE SUPPRESSOR AND SYNC. OR GOV.-FILT. MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F INTERFERENCE. b. FOR OTHER INSTALLATIONS, OMIT SUPPRSSORS AND CONNECT INPUTS AND GOV. MOTOR DIRECT TO TERMINALS SHOWN.		
8	USE SYNCHRONOUS MOTOR ON REGULATED 60~(±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60~UNREGULATED A.C.		
9	SELECTOR MAGNETS MUST BE CONNECTED IN PARALLEL.		
10	WHEN SIGNAL LINE BREAK SWITCH IS NOT USED, ADD DASHED (---) CONNECTION AT CABINET TERMINAL BLOCK BETWEEN C10 AND C11.		
11	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING SIGNAL LINE.		


A.C. MOTOR, GOVERNED (NOTE 8)
CENTRIFUGAL GOVERNOR
SERIES FIELD WINDING
SERIES FIELD WINDING
GROUNDED SIDE
NOTE 3
115 VOLTS A.C. (NOTE 8)
POWER INPUT
CONVENIENCE RECEPT.
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
POWER SWITCH
4 AMP SL-BIIFUSE
PROTECTIVE GROUND
CABINET GROUND SCREW
LESU GND SCREW
AC
RADIO INTERFERENCE SUPPRESSION (IN RF FILTERED MOTOR UNIT ONLY) (NOTE 7)
6.3V LAMPS (2 PLS)
COPY LIGHT LAMPS (IN CABINET)
MARGIN INDICATOR LAMP (IN CABINET)
6OV LAMP
MAINT ON
OFF
NORMAL ON
LIGHT SWITCH (IN CABINET)
MARGIN INDICATOR CONTACTS (IN KEYBOARD)
THERMAL CUTOUT
A.C. MOTOR, SYNCHRONOUS (NOTE 8) (FOR GOVERNED MOTOR, SEE ABOVE)
STARTING WINDING
OPERATING WINDING
MOTOR START RELAY
STARTING CAPACITOR
LINE SHUNT RELAY 2250Ω
SIGNAL BELL (IN CABINET) 190Ω
SIGNAL BELL CONTACTS (IN TYPING UNIT FUNCTION BOX)
177010 SELECTOR MAGNET DRIVER (SEE 4445WD)
NOTE 6
NOTE 9
SELECTOR MAGNETS (ON TYPING UNIT)
NOTE 3
SIGNAL GENERATOR CONTACTS
ELECTRICAL NOISE SUPPRESSOR (IN KEYBOARD)
SPACING
MARKING
SIGNAL LINE BREAK SWITCH (IN KEYBOARD)
NOTE 10
LINE SHUNT CONTACTS
AUX. CONTACTS (IN LINE SHUNT RELAY)
MOTOR TERMINAL BLOCK
LOCAL REMOTE SWITCH (DPDT) SHOWN IN LOCAL POSITION.
115~AC
PRINT-NON PRINT SOLENOID WINDING
REPERFORATOR CONTROL CONTACTS (IN TYPING UNIT FUNCTION BOX)
RADIO INTERFERENCE SUPPRESSOR (IN R.F. FILTERED CABINET) (NOTE 7)
SPARE LEADS
SIGNAL LINE
NOTE 3
FOR CUSTOMER'S USE

5929 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
A	12-10-63	78861

PROJ. NO. 5929WD

SCHEMATIC
WIRING DIAGRAM
ELECTRICAL
SERVICE UNIT
LESU 95 AND
ASSOCIATED MODEL 28
APPARATUS

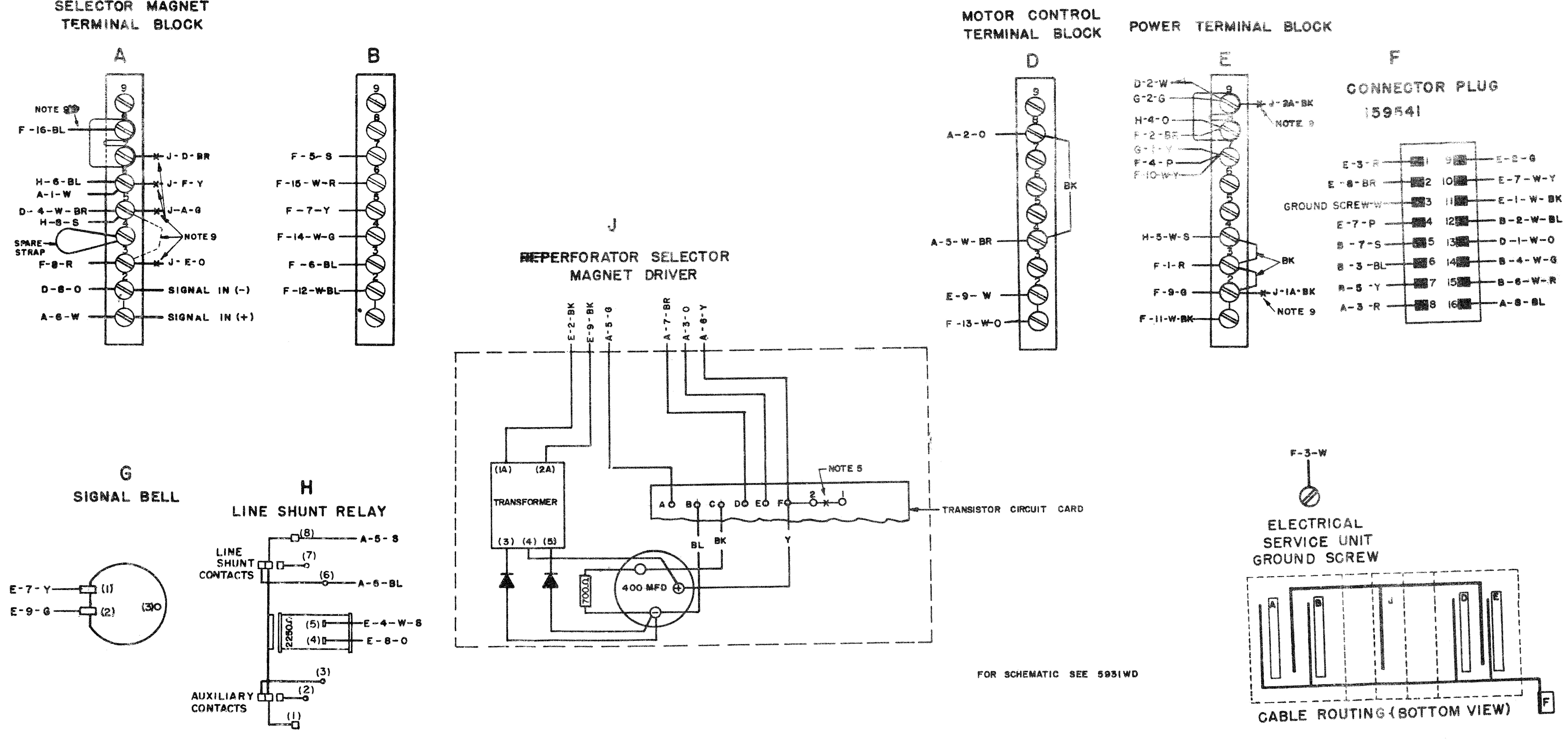
DATE: 9-1-62
R.D. FILE NO. 1-188/188.90AA
DRAWN. E.E. CHKD.
ENGD. RSP APPD.

TELETYPE
CORPORATION

5929 WD

NO	NOTES
1.	WIRING LEGEND: A-1-W-BL A — DISTANT TERMINATING AREA 1 — DISTANT TERMINAL DESIGNATION W-BL — WIRE COLOR CODE
2.	COLOR CODE BK - BLACK W-[illegible]-[illegible]LACK BR - BROWN [illegible] R - RED [illegible] O - ORANGE [illegible] Y - YELLOW [illegible] G - GREEN W-G — WHITE-GREEN BL - BLUE W-BL — WHITE-BLUE P - PURPLE W - WHITE W-S — WH[illegible] SLATE S - SLATE
3.	UNIT WIRED FOR 115 VOLTS 50 TO 60 CYCLE A.C. POWER INPUT ONLY.
4.	CONNECTOR VIEWED FROM SOLDER TERMINAL END.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP NEUTRAL OPERATION REMOVE CONNECTIONS AS TABULATED BELOW.
6.	LINE SHUNT RELAY SHOWN CONTROLLED BY POWER SWITCH AND SHUNTING SELECTOR MAGNET DRIVER.
7.	SELECTOR MAGNETS ARE TO BE WIRED IN PARALLEL FOR 60 MILLIAMPERE OPERATION
8.	ASSOC. CABLE NUMBERS 159939 CABLE ASSEM., LESU
9.	SELECTORS MAGNETS CAN BE CONNECTED DIRECTLY IN THE SIGNAL LINE CIRCUIT FOR NEUTRAL OPERATION AS FOLLOWS: DISCONNECT AND TAPE ALL SELECTOR MAGNET DRIVER LEADS SHOWN (—✕—). 20 MILLIAMPERE, 60 & 75 WPM OPERATION (OR ANY INTERMEDIATE SPEED). A. STRAP A6 TO A3 B. MOVE BLUE LEAD FROM TERMINAL A8 TO A6. 60 MILLIAMPERE, 60, 75 & 100 WPM OPERATION (OR ANY INTERMEDIATE SPEED) A. STRAP A5 TO A3 B. MOVE BLUE LEAD FROM TERMINAL A8 TO A6 C. CHANGE WIRING ON SELECTOR MAGNETS FOR 60 MILLIAMPERE OPERATION.

SIGNAL LINE CURRENT	CONNECTION REMOVED	
020 AMP.	J1 TO J2	



FOR SCHEMATIC SEE 5931WD

5930 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.

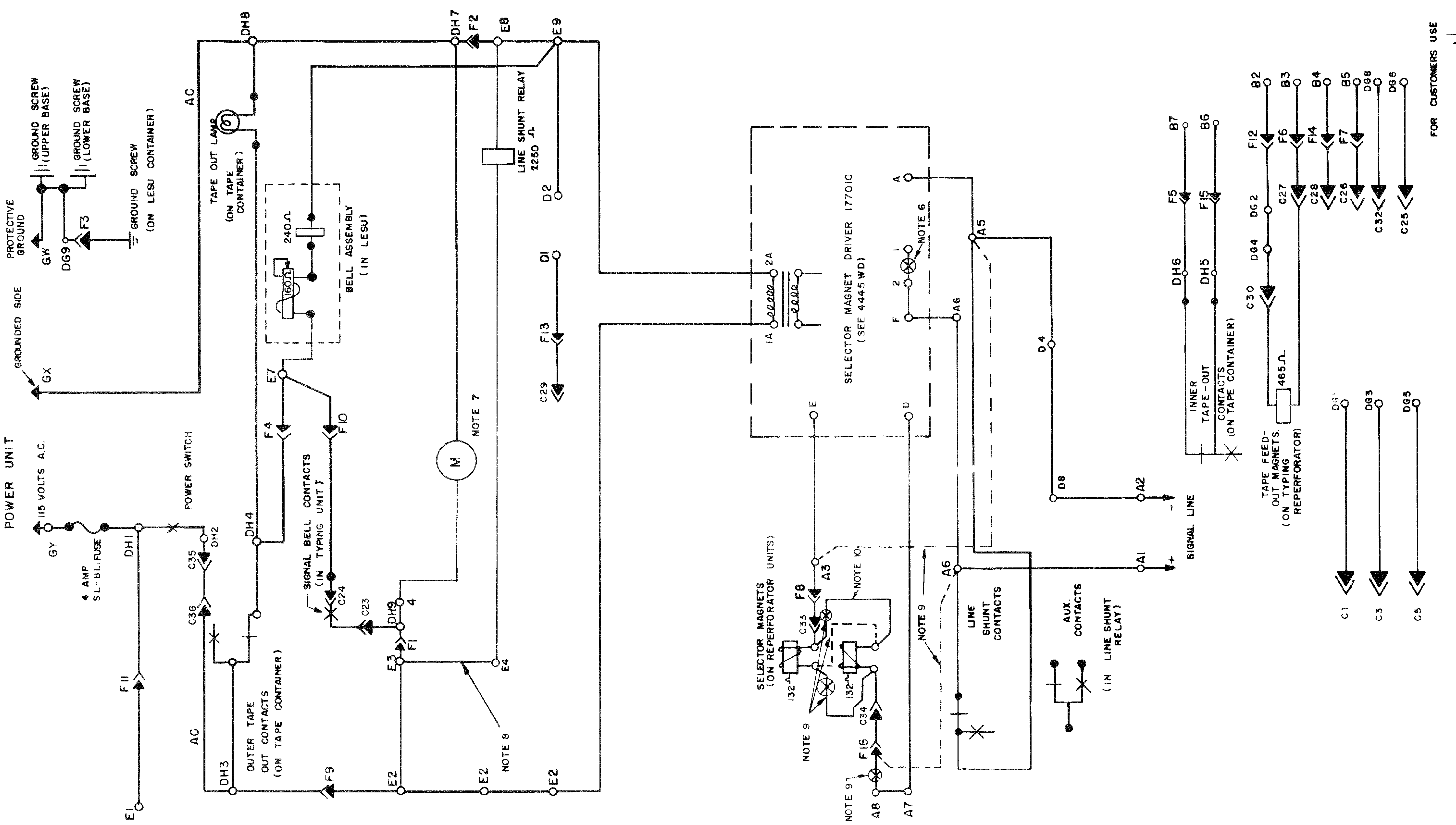
ACTUAL WIRING DIAGRAM. MODEL 28 ELECTRICAL SERVICE UNIT. LESU 96

APPROVALS	
D AND R	E OF M
B-NUMBER	
PROD. NO. 5930 WD	
DATE: 9-1-62	
P.D. FILE NO. 1-159/15865AA	
DRAWN E E	CHKD
ENG'D RSP	APPD.

TELETYPE CORPORATION

5930 WD

NO.	NOTES
1.	WIRING DIAGRAMS OF INDIVIDUAL UNITS UNITS DIRECTLY OPERABLE WITH LESU96 4445WD SELECTOR MAGNET DRIVER- 177010 5930 WD ELECTRICAL SERVICE UNIT LESU96 2900 WD MOTOR UNITS - LMU 3,4,6. 3736 WD TYPING REPERFORATOR BASE LRB 21,30 3628 WD TYPING AND NON-TYPING REPERFORATOR
2.	LEGEND C 36 POINT CONNECTOR G 3-POINT CONNECTOR (ON BASE) O DG TERMINAL BLOCK (ON BASE) O DH TERMINAL BLOCK (ON BASE) F 16-POINT CONNECTOR O A TERMINAL BLOCK (IN LESU) O B TERMINAL BLOCK (IN LESU) O D TERMINAL BLOCK (IN LESU) O E TERMINAL BLOCK (IN LESU) —+— N. C. CONTACT —×— N. O. CONTACT
3.	DOT-DASH (--——-) LINES INDICATE FILTERING, SHIELDING AND SUPPRESSION NETWORKS.
4.	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.
5.	(A) RESISTANCE VALUES IN OHMS - (Ω) (B) INDUCTANCE VALUES IN MICROHENRIES (MH) (C) CAPACITANCE VALUES IN MICROFARADS (MFD)
6.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP LINE CURRENT, OMIT CONNECTION MARKED (-⊗-) IN SELECTOR MAGNET DRIVER.
7.	USE SYNCHRONOUS MOTOR ON REGULATED 60 ∿ (±1%) A.C. POWER ONLY. GOVERNED MOTORS AND OTHER POWER CIRCUITS OPERABLE ON 50 TO 60 ∿ UNREGULATED A.C.
8.	LINE SHUNT RELAY WHICH SHUNTS SELECTOR MAGNET DRIVER INPUT IS SHOWN CONTROLLED BY POWER SWITCH.
9.	FOR SPECIAL APPLICATIONS SELECTOR MAGNETS CAN BE OPERATED DIRECTLY IN A NEUTRAL SIGNAL LINE AS FOLLOWS: COMPLETELY DISCONNECT SELECTOR MAGNET DRIVER. FOR 20 MILLIAMPERE, 60 AND 75 WPM OPERATION (OR ANY INTERMEDIATE SPEED.) 1. STRAP A5 TO A3 2. MOVE LEAD FROM TERMINAL A8 TO A6 3. ADD DASHED (---) LEAD, OMIT -⊗- LEADS ON SELECTOR MAGNETS FOR 60 MILLIAMPERE, 60, 75 & 100 WPM OPERATION (OR ANY INTERMEDIATE SPEED.) 1. STRAP A5 TO A3. 2. MOVE LEAD FROM TERMINAL A8 TO A6
10.	FOR OPERATION WITH SELECTOR MAGNET DRIVER, SELECTOR MAGNETS MUST BE CONNECTED IN PARALLEL.



5931 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
2	12-10-63	78861
3	1-29-68	94715

WDP

SCHEMATIC
WIRING DIAGRAM
MODEL 28

REPERFORATOR BASE
LRB 21,30
ELECT SERVICE
UNIT
LESU 96

APPROVALS

D AND R	E OF M

E-NUMBER
PROD. NO. 5931 WD
DATE 9-1-
P.D. FILE NO. 1-49.65AA
DRAWN E E CHKD
ENGD R.S.P. APPD

TELETYPE
CORPORATION

3

5931 WD

6489 WD

REVISIONS		
ISSUE	DATE	AUTHOR NO.
2	7-29-65	88100
3	5-19-67	93282

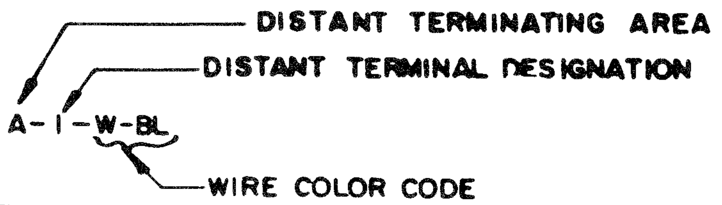
ACTUAL
WIRING DIAGRAM
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU107

APPROVALS
D AND R. E OF M

DATE 6-7-63
P.D. FILE NO. 25-A65 219A
E-NUMBER
PROD. NO. 6489WD
DRAWN N.K.G. CHKD.
ENGD. J.C.F. APPD.

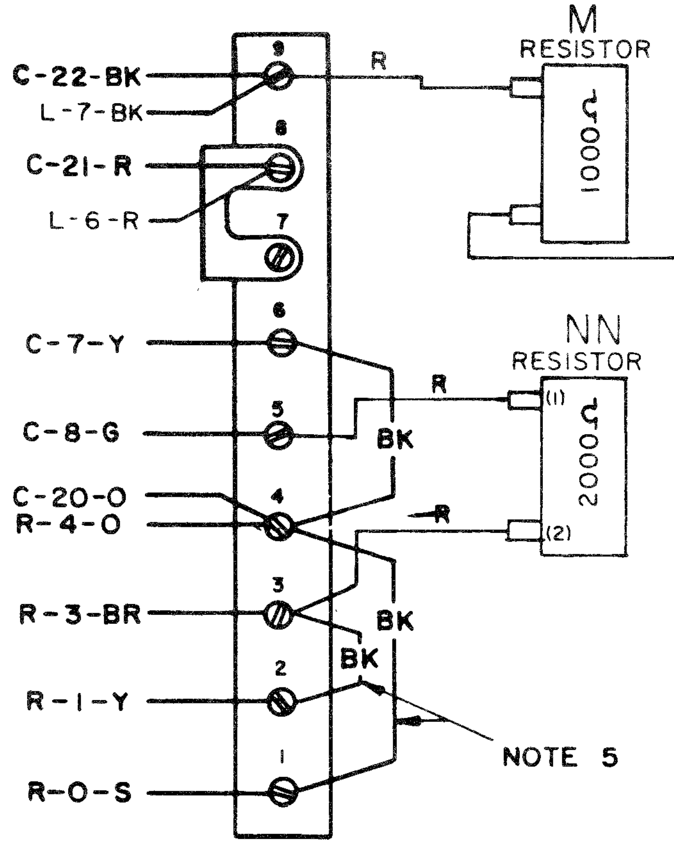
TELETYPE
CORPORATION

6489 WD

<table>
<tr><th>NO</th><th>NOTES</th></tr>
<tr><td>1.</td><td>WIRING LEGEND:
 </td></tr>
<tr><td>2.</td><td>COLOR CODE
BK-BLACK
BR-BROWN
R-RED
O-ORANGE
Y-YELLOW
G-GREEN
BL-BLUE
P-PURPLE
W-WHITE
S-SLATE
W-BK-WHITE-BLACK
W-BR-WHITE-BROWN
W-R - WHITE-RED
W-O - WHITE-ORANGE
W-Y - WHITE-YELLOW
W-G - WHITE-GREEN
W-BL- WHITE-BLUE
W-P - WHITE-PURPLE
W-S - WHITE-SLATE</td></tr>
<tr><td>3.</td><td>UNIT WIRED FOR 115 VOLTS. 50 TO 60 CYCLE A.C. POWER INPUT ONLY.</td></tr>
<tr><td>4.</td><td>PLUGS VIEWED FROM SOLDER TERMINAL ENDS</td></tr>
<tr><td>5.</td><td>CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION REMOVE AND ADD CONNECTIONS AS FOLLOWS:
<table>
<tr><th>SIGNAL LINE CURRENT</th><th>CONNECTIONS REMOVED</th><th>CONN. ADDED</th></tr>
<tr><td>.020 AMP.</td><td>A1-A4, A2-A3</td><td>A1-A2*</td></tr>
</table>
* PLACE TWO STRAPS IN PARALLEL</td></tr>
<tr><td>6.</td><td>THE SPARE LEADS FROM THE KEYBOARD (OR REC. ONLY BASE) AND TYPING UNIT CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT RESPECTIVELY.</td></tr>
<tr><td>7</td><td>REMOVE THIS STRAP WHEN ASSOCIATED KEYBOARD OR REC-ONLY BASE IS EQUIPPED WITH AN ELECTRICAL BREAK SWITCH.</td></tr>
<tr><td>8.</td><td>RESISTOR OMITTED-SPLICE AND TAPE C-36-R TO F-6-R</td></tr>
<tr><td>9</td><td>TAPE AND TUCK UNUSED LEADS ON "C" BLOCK AND "E" BLOCK</td></tr>
<tr><td>10</td><td>REMOVE Y LEAD FROM F-8 TAPE & TUCK.
REMOVE W FROM F-17 AND PLACE ON F-8.</td></tr>
</table>

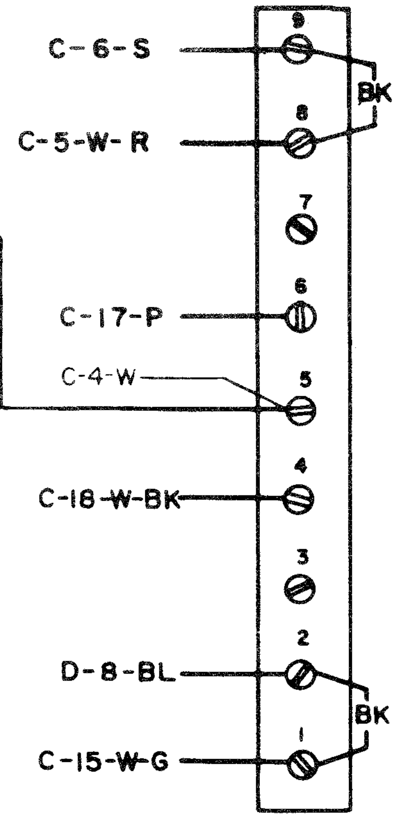
A

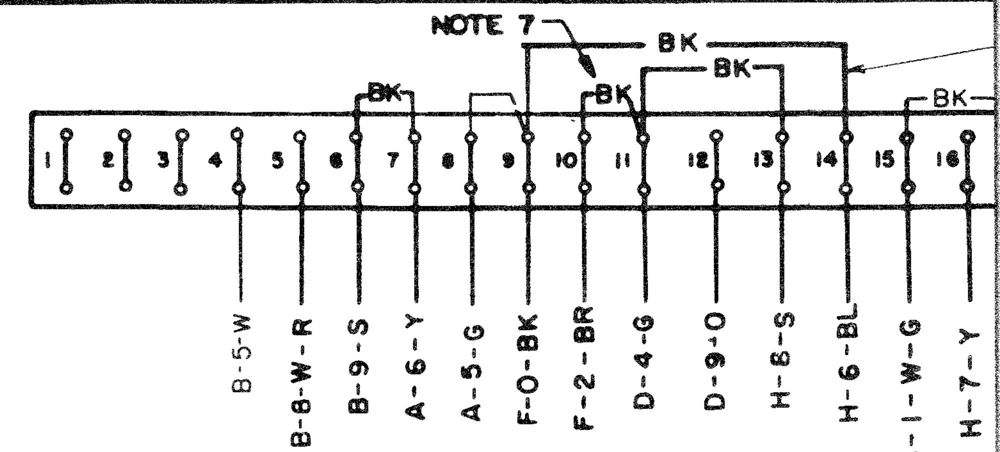
SELECTOR MAGNET TERMINAL BLOCK



B

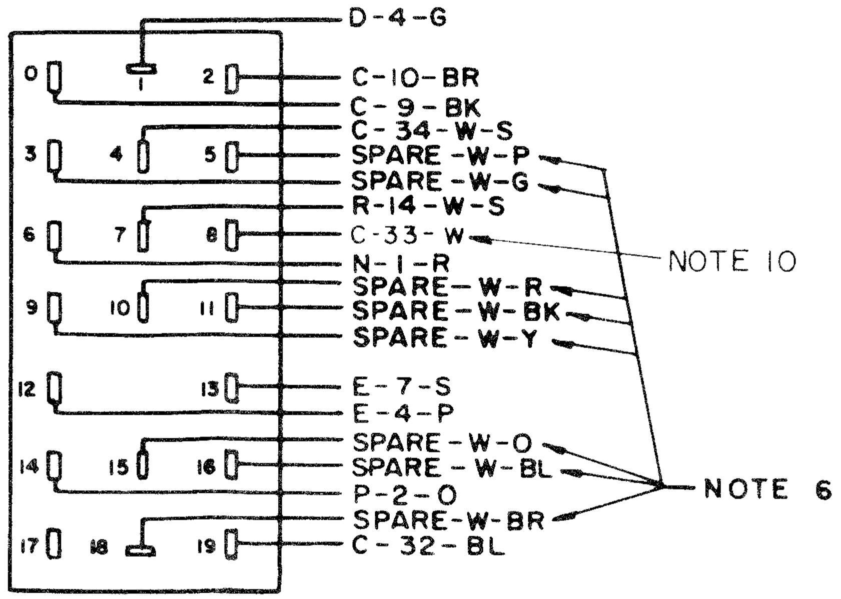
LINE TEST KEY TERMINAL BLOCK





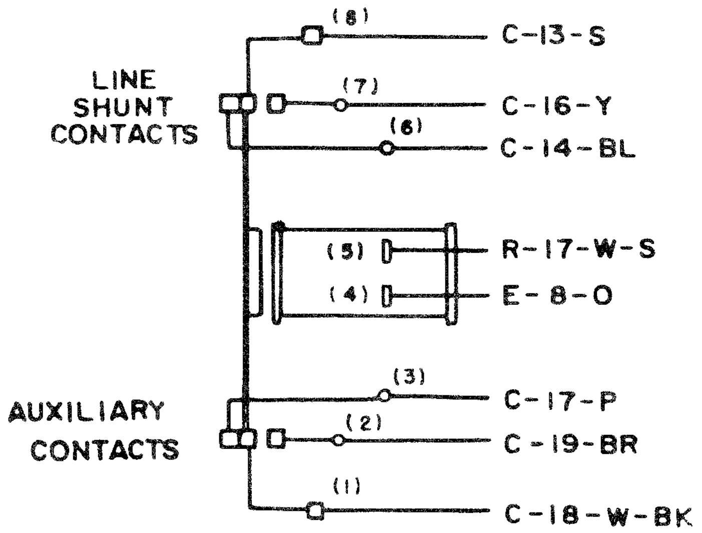
F

KEYBOARD FOR RECEIVING ONLY BASE CONNECTOR PLUG

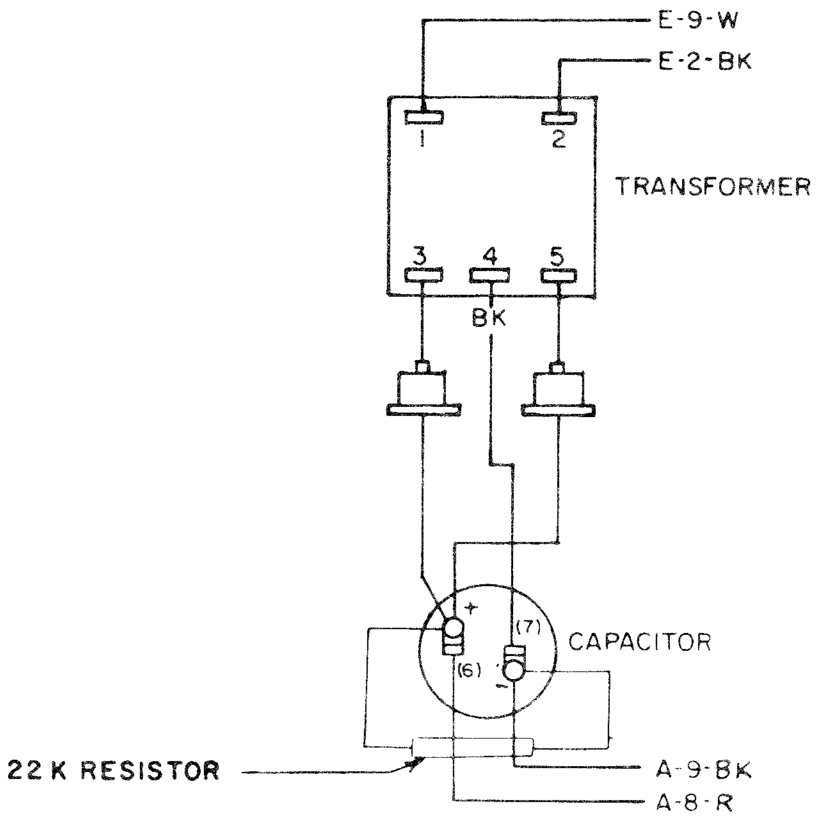


H

LINE SHUNT RELAY



L
152950
RECTIFIER ASSEMBLY



6490 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
2	4-27-65	86827

LINE SHUNT RELAY
2250Ω
55 V.A.C. TRANSFORMER (IN CABINET)
LIGHT SWITCH (IN CABINET)
SIGNAL BELL IN CABINET
190Ω
PRINT IN REQUEST LAMP (YELLOW)
KEYBOARD LOCK LAMP (RED) (LK)
AUX CONTACTS ON LINE SHUNT RELAY
4 AMP TIME DELAY FUSE
LINE SHUNT SWITCH (LK)
MOTOR THERMAL CUT-OUT SWITCH
START WINDING
OPERATING WINDING
MOTOR START RELAY
START CAP 43 UF
SIGNAL BELL CONTACTS IN TYPING UNIT STUNT BOX
RECTIFIER 120 MA. (MAX) 115 V.D.C. OUTPUT
PRIMARY 115 V.A.C. SEC 102 V.A.C.
26.0Ω
56.5Ω
220 UF
1000Ω
2000Ω
132Ω
SELECTOR MAGNETS TYPING UNIT
NOTE 6
NOTE 6
2000Ω
CLUTCH MAGNET (LD)
CONTACTS
LD AUX CONTACTS
CODE READING CONTACTS (PARALLEL OUTPUT) PRINTER
PRINTER CODE BAR
4
1
5
2
3
UNIV.
(IN KEYBOARD)
.1UF
0.01UF
220µH 1.4Ω
ELECTRICAL NOISE SUPPRESSOR
SPACING
MARKING
SIGNAL GENERATOR CONTACTS
LINE SHUNT CONTACTS
PRINT IN REQUEST SWITCH ON KEYBOARD
FOR CUSTOMERS USE
PAPER OUT ALARM SW
MAR. IND SW.
PAPER OUT LAMP

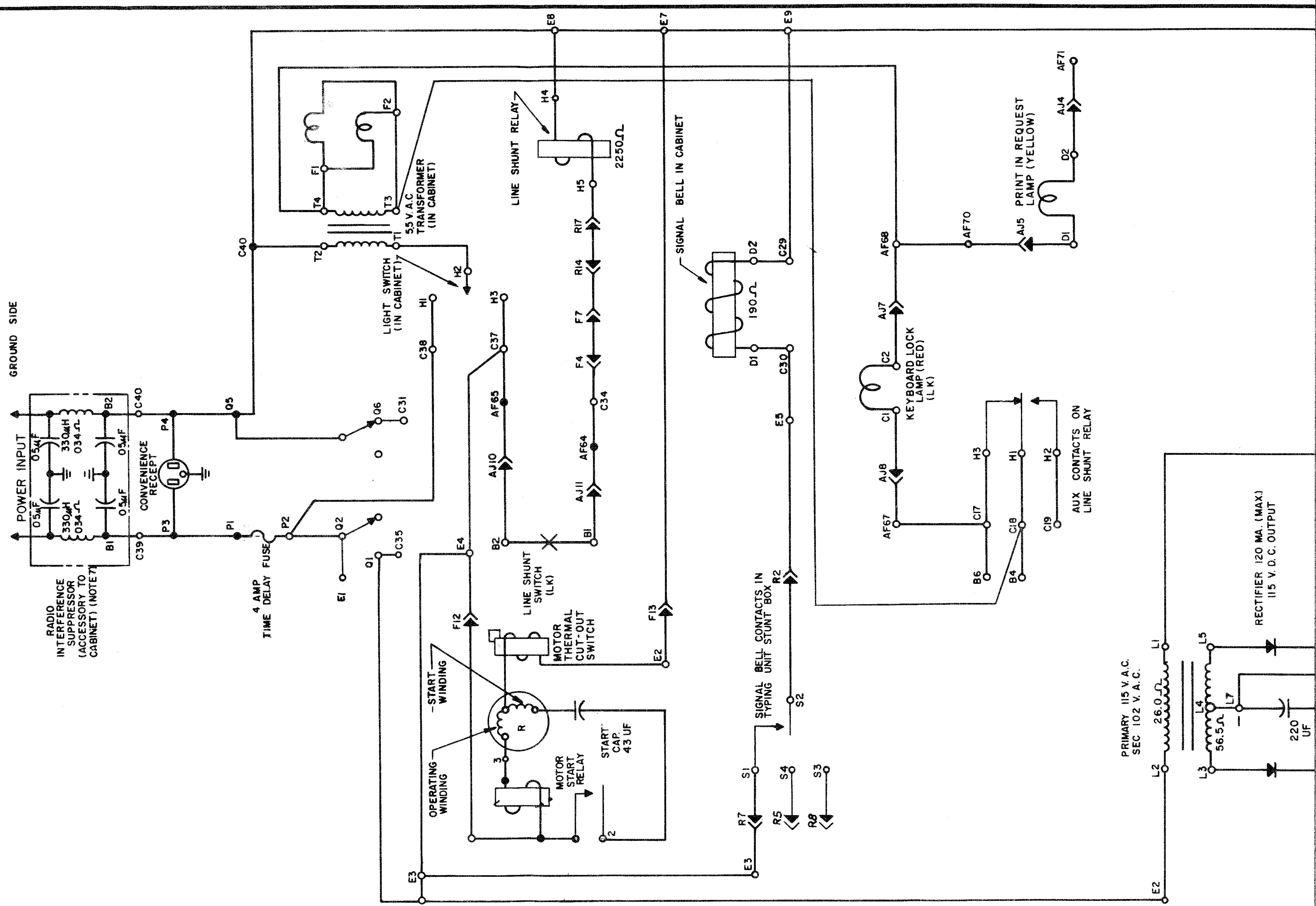
SCHEMATIC
WIRING DIAGRAM
MODEL 28
PAGE PRINTER SET
WITH FACILITIES PROVIDED
BY
ELECTRICAL SERVICE
UNIT LESU107
AND ASSOCIATED UNITS

APPROVALS	
D AND R 10/25/63	E OF M
E-NUMBER	
PROD.NO. 6490WD	
DATE: 6-15-63	
P.D. FILE NO. 25A[illegible]	
DRAWN E.M. N.K.G.	CHKD.
ENGD. J.C.F.	APPD.

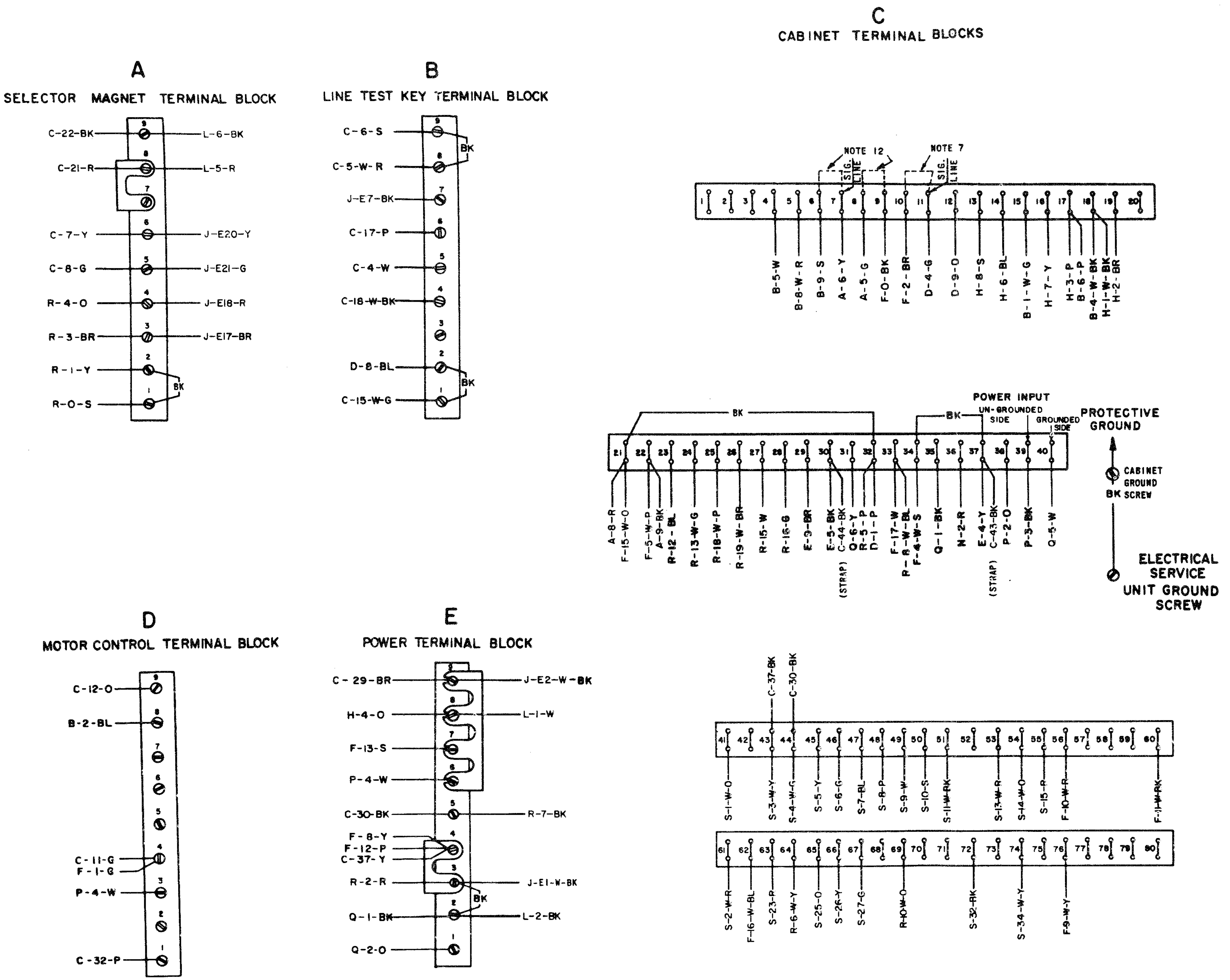
TELETYPE
CORPORATION

6490 WD

NO.	NOTES
1	FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE UNITS DIRECTLY OPERABLE WITH LESU107. 6486WD ACTUAL LK45 6487WD ACTUAL LP115 6488WD ACTUAL LAC222 6489WD ACTUAL LESU107 2900WD MOTOR UNIT
2.	LEGEND ○ A SELECTOR MAGNET TERMINAL BLOCK IN (LESU) ○ B LINE TEST KEY TERMINAL BLOCK (IN LESU) ○ C CABINET TERMINAL BLOCK ○ D MOTOR CONTROL TERMINAL BLOCK (IN LESU) ○ E POWER TERMINAL BLOCK (IN LESU) ◀< F KEYBOARD BASE CONNECTOR ◀< R TYPING UNIT CONNECTOR ○ S MOTOR TERMINAL BLOCK ON LK ● AE CABINET TERMINAL BLOCK ● AF CABINET TERMINAL BLOCK < AH CABINET CONNECTOR ◀ AK CABINET CONNECTOR < AJ CABINET CONNECTOR ◀ AG PRINTER CONNECTOR < AC DISTRIBUTOR CONNECTOR ◀ AD CABINET CONNECTOR
3.	DOT DASH — — ———— LINES INDICATE FILTERING SHIELDING AND SUPPRESSION NETWORKS
4	ALL APPARATUS IS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS
5	a. RESISTANCE VALUES IN OHMS (Ω) b. INDUCTANCE VALUES IN MICROHENRIES (μH) c. CAPACITANCE VALUES IN MICROFARADS (μF)
6.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE. OPERATION FOR .020 AMP LINE CURRENT ADD DASHED (-----). CONNECTIONS MARKED (—✕—) IN SELECTOR MAGNET CIRCUIT.
7.	USE POWER AND SIGNAL LINE SUPPRESSORS AND SYNC. OR GOV. FILTER MOTOR FOR INSTALLATIONS REQUIRING MINIMUM R.F. INTERFERENCE. FOR OTHER INSTALLATIONS OMIT SUPPRESSORS AND CONNECT INPUT AND GOV MOTOR IF USED DIRECT TO TERMINALS SHOWN.
8.	USE SYNCHRONOUS MOTOR REGULATED 60∿(±1%) A.C. POWER ONLY GOVERNED MOTOR AND OTHER POWER CIRCUITS OPERABLE ON 50-60∿ UNREGULATED A.C.



NO.	NOTES
1.	WIRING LEGEND: A-1-W-BL A — DISTANT TERMINATING AREA 1 — DISTANT TERMINATING DESIGNATION W-BL — WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK G - GREEN BR - BROWN BL - BLUE R - RED P - PURPLE O - ORANGE W - WHITE Y - YELLOW S - SLATE
3.	UNIT WIRED FOR 115 VOLTS, 60 CYCLE A.C. POWER INPUT ONLY.
4.	PLUGS VIEWED FROM SOLDER TERMINAL ENDS.
5.	ASSOCIATED CABLES: 157260 CABLE ASSEMBLY 304687 CABLE ASSEMBLY (MAIN) FOR SCHEMATIC WIRING DIAGRAM, SEE 7157WD.
6.	THE SPARE LEADS FROM THE KEYBOARD (OR RECEIVE-ONLY BASE) AND TYPING UNIT CONNECTOR PLUGS ARE TERMINATED IN THE RIGHT AND LEFT ENDS OF THE ELECTRICAL SERVICE UNIT, RESPECTIVELY.
7.	ADD THIS STRAP WHEN ASSOCIATED KEYBOARD OR RECEIVE-ONLY BASE IS NOT EQUIPPED WITH A SIG. LINE BREAK SWITCH.
8.	TERMINAL DESIGNATIONS SHOWN IN PARENTHESES ARE FOR REFERENCE AND ARE NOT MARKED ON COMPONENTS.
9.	FOR SCHEMATIC WIRING DIAGRAM OF SELECTOR MAGNET DRIVER, SEE 7175WD.
10.	SPARE LEADS ARE TO BE TAPED AND TIED BACK TO 157260 CABLE. TERMINALS 41-80 AND CABLE ARE PART OF 154741 MOD. KIT.
11.	FOR SCHEMATIC WIRING DIAGRAM OF 199876 RECTIFIER, REFER TO 7127WD. FOR 306631, REFER TO 7287WD.
12.	EXTERNAL CIRCUITS TO BE SUPPLIED BY CUSTOMER.



7156 WD

ISSUE	DATE	AUTH. NO.
~~A~~ 2	4-14-64	81753
~~B~~ 3	4-16-64	81755
4	5-14-64	81758
5	1-7-65	84189

SHEET 1 OF 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU113

APPROVALS

D AND R	E OF M
------	------

E-NUMBER
PROD. NO. 7156WD
DATE 1-7-63
P.D. FILE NO. 11-A25AA
DRAWN P.J.S. CHKD.
ENGD. F.G.H. APPD.

TELETYPE
CORPORATION

5

7156 WD

SEE SHEET 1 FOR NOTES.

NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

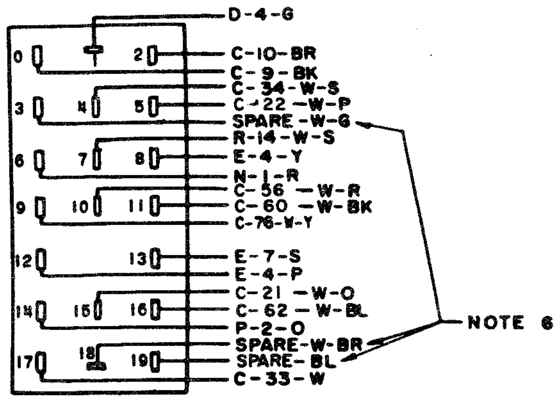
7156 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
~~A~~ 2	4-14-64	81763
~~B~~ 3	4-16-64	81755
4	5-14-64	81768
5	1-7-65	84189
6	3-22-68	97526 RC

F

KEYBOARD OR RECEIVING ONLY BASE CONNECTOR RECEPTACLE



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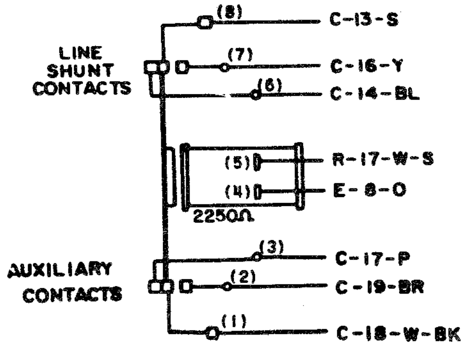
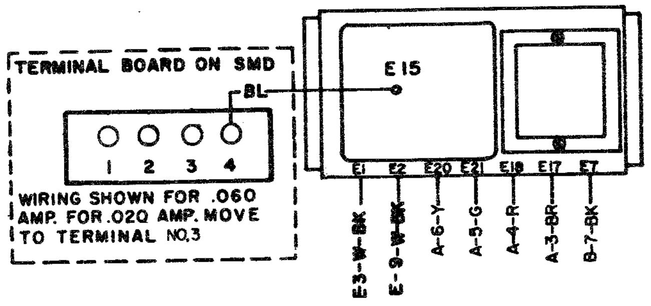
LINE SHUNT RELAY



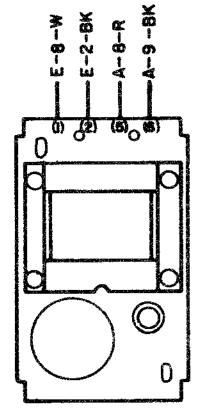
J

SELECTOR MAGNET DRIVER W/ SEMICONDUCTOR RECTIFIER (NOTE 8 & 9)



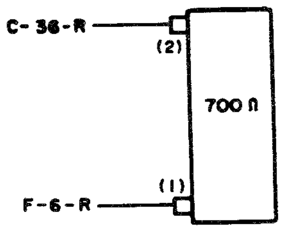
L

RECTIFIER ASSEMBLY (NOTE 11)



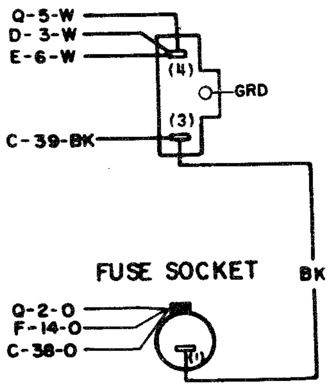
N

MARGIN INDICATOR LAMP RESISTOR



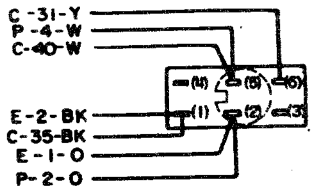
P

CONVENIENCE RECEPTACLE



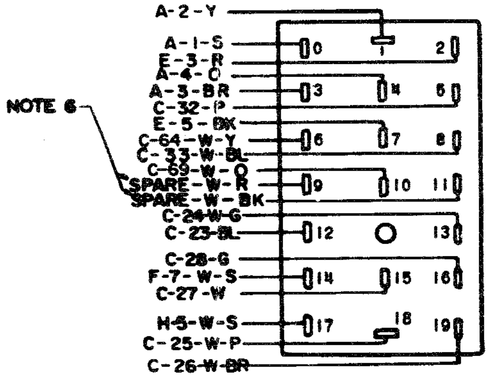
Q

POWER SWITCH



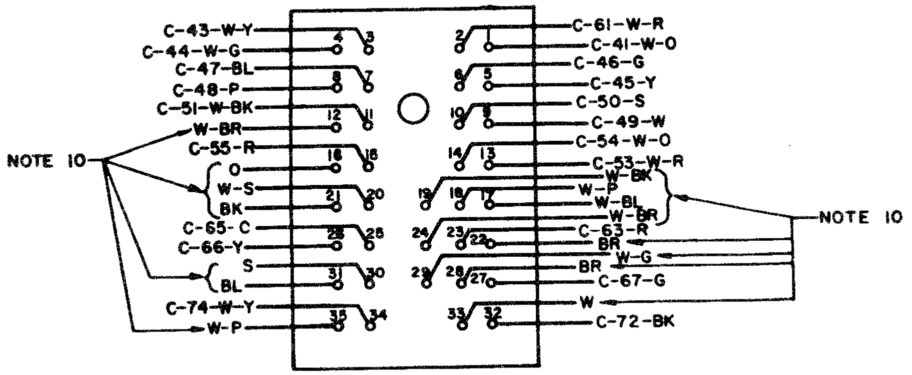
R

TYPING UNIT CONNECTOR RECEPTACLE

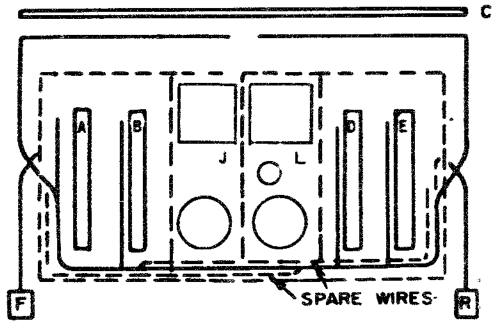


S

RIGHT CONNECTOR RECEPTACLE & CABLE ASSEMBLY



PART OF 154741 MOD. KIT
FURNISHED WITH TYPING UNIT



CABLE ROUTING
(BOTTOM VIEW)

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 2 OF 2

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL
SERVICE UNIT
LESU113

APPROVALS	
D AND R	E OF M
-------	------

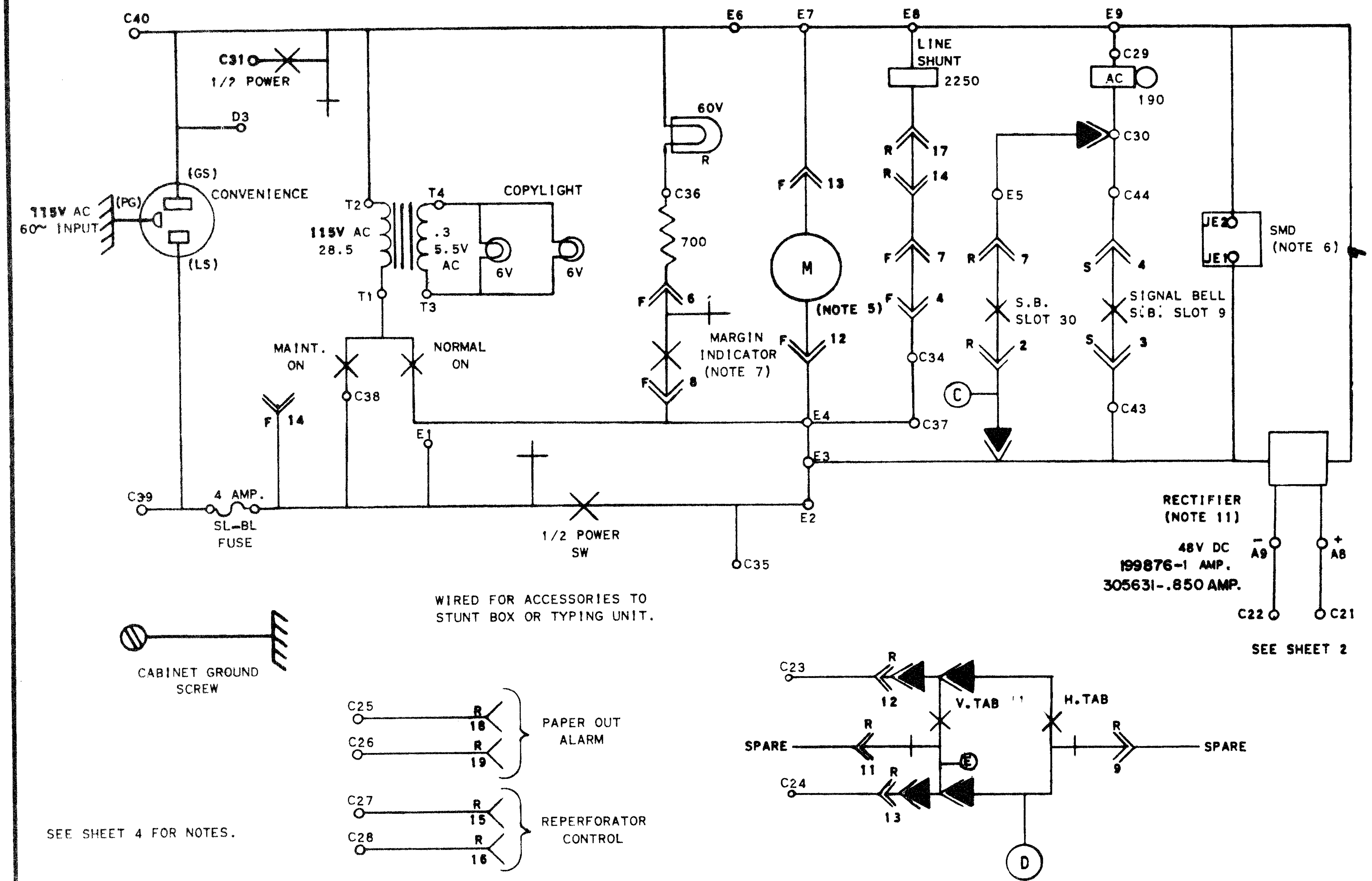
E-NUMBER
PROD. NO. 7156WD
DATE 1-7-63
P.D. FILE NO. 11-A25AA
DRAWN P.J.S.
CHKD.
ENGD. F.G.H.
APPD.

TELETYPE
CORPORATION

7156 WD

7157 WD		
ISSUE	DATE	AUTH. NO.
A2	4-14-64	81753
3	1-7-65	84139

POWER CIRCUIT



SEE SHEET 4 FOR NOTES.

ET:06:47
TC25316-341

SHEET 1 OF 4

SCHEMATIC
WIRING DIAGRAM
FOR MODEL 20
LESU113

APPROVALS

D AND R	E OF M
HJK 3-26-64	

E-NUMBER

PROD. NO. 7157WD

DATE: 1-6-64

P.D. FILE NO. 11-A25AA

DRAWN. PJS	CHKD.
ENGD. FGH	APPD.

TELETYPE
CORPORATION

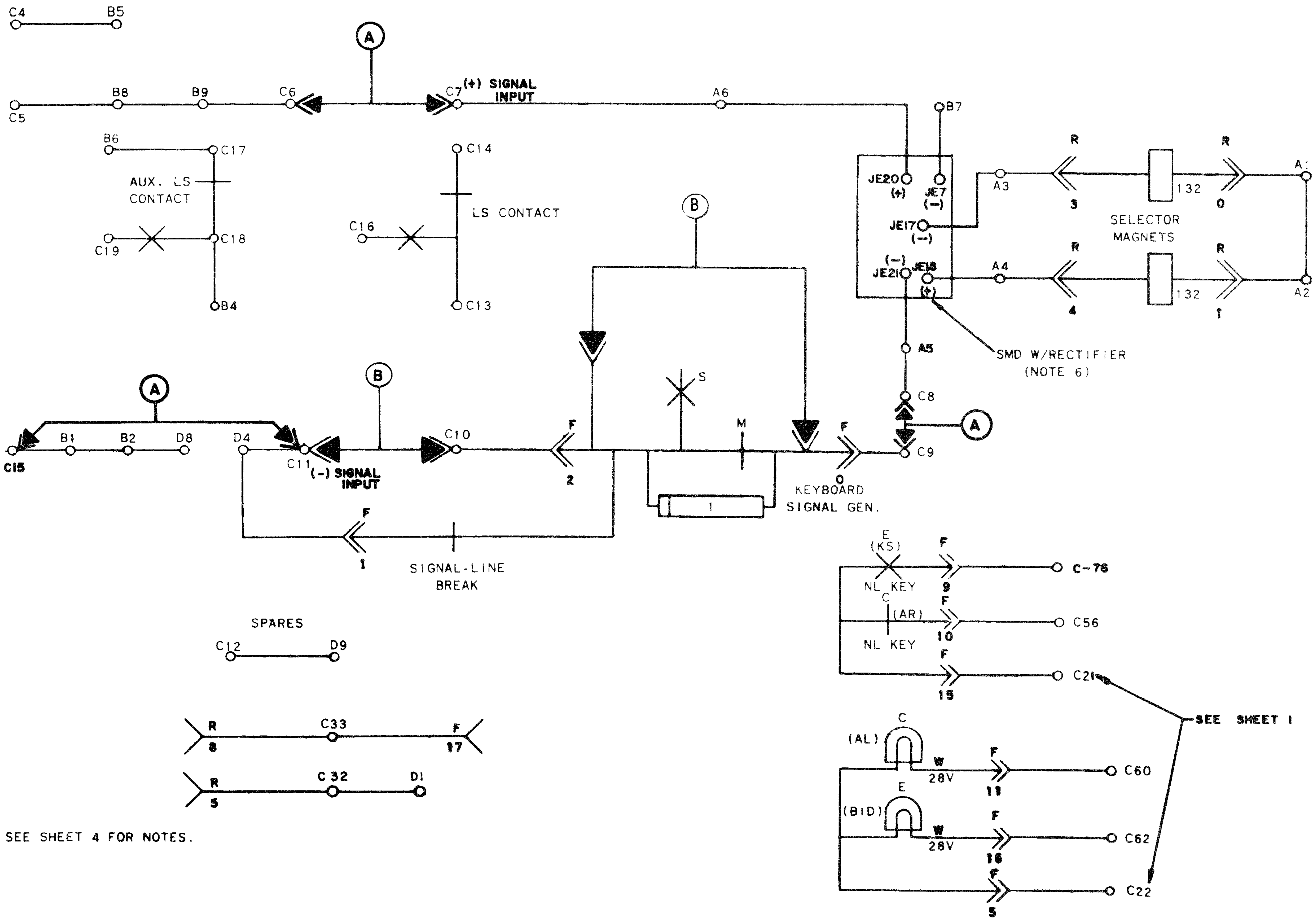
3 7157 WD

EFH ET-131401

7157 WD

ISSUE	DATE	AUTH. NO.
2	4-14-64	81753
3	5-14-64	81758

SIGNAL CIRCUIT



SEE SHEET 4 FOR NOTES.

SHEET 2 OF 4

SCHEMATIC
WIRING DIAGRAM
FOR MODEL 28
LESU113

APPROVALS

PROD. NO. 7157WD

DATE: 1-7-64

P.D. FILE NO. 11-A25AA

DRAWN PJS CHKD

ENGD. FGH APPD

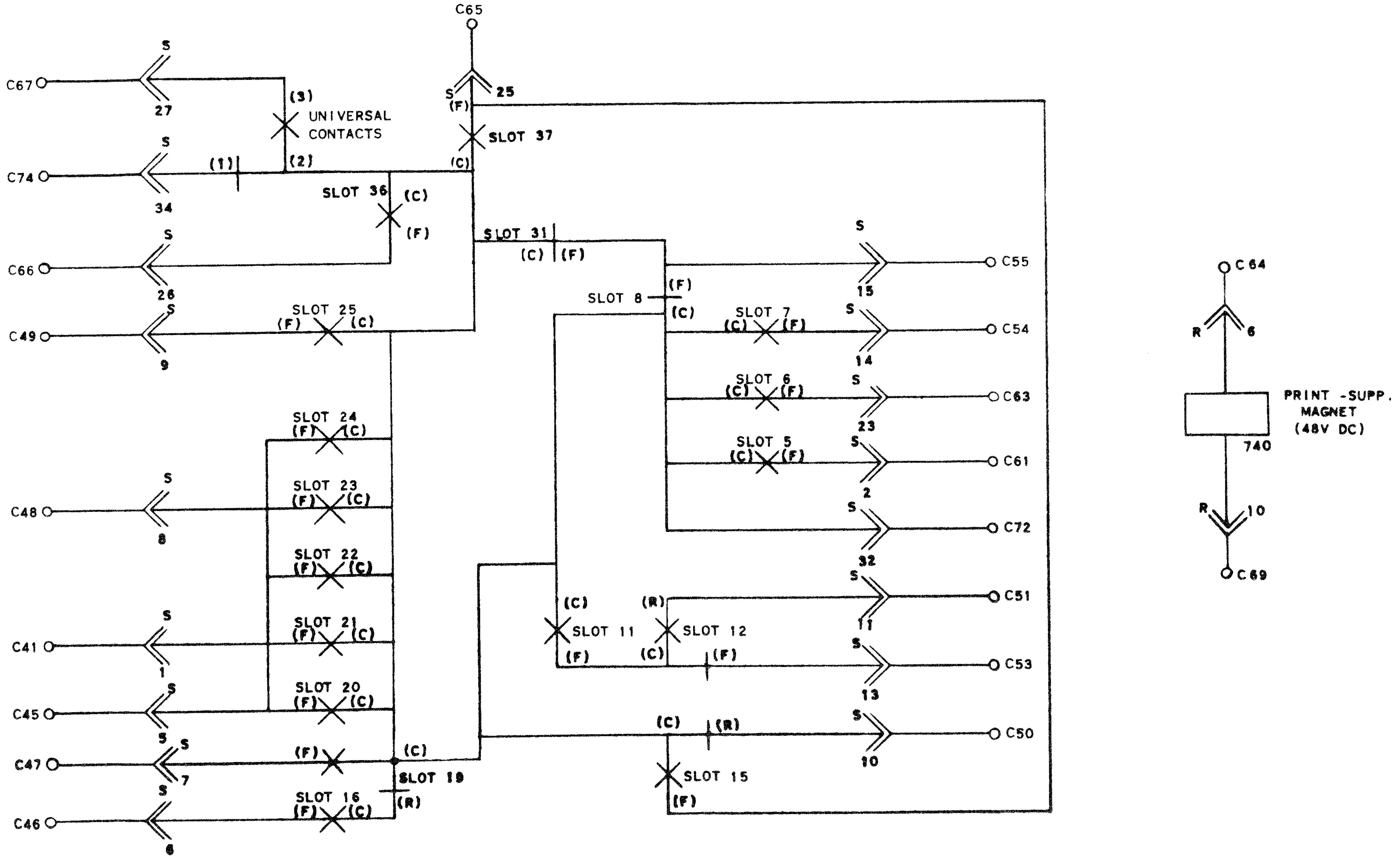
TELETYPE CORPORATION

3 7157 WD

7157 WD

ISSUE	DATE	AUTH. NO.

STUNT BOXES AJM, AJN, AJP
(NOTE 8)



F - FRONT CONTACT
C - COMMON CONTACT
R - REAR CONTACT

SEE SHEET 4 FOR NOTES.

SHEET 3 OF 4

SCHEMATIC
WIRING DIAGRAM
FOR MODEL 28
LESU113

APPROVALS

D AND R	E OF M
	C 1

E-NUMBER

PROD. NO. 7157WD

DATE: 1-7-64

P.D. FILE NO. 11-A25AA

DRAWN PJS CHKD

ENGD. FGH APPD

TELETYPE
CORPORATION

1 7157 WD

EFH

NO. NOTES

1. FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS, SEE:

WD NO.	UNITS OPERABLE WITH LESU
7160WD	KEYBOARD LK50
3236WD	CABINETS LAC217, LAC203/238
2900WD	MOTOR UNITS LMU3, LMU6
7020WD	PAGE TYPING UNITS LP118, LP119, LP120
7156WD	ELECTRICAL SERVICE UNIT LESU113
2883WD	BASE, RECEIVING ONLY LB4
7021WD	BASE TYPING UNIT LB121

2. LEGEND:

o A SELECTOR MAGNET TERMINAL BLOCK (IN LESU)
o B LINE TEST KEY TERMINAL BLOCK (IN LESU)
o C CABINET TERMINAL BLOCK
o D MOTOR CONTROL TERMINAL BLOCK (IN LESU)
o E POWER TERMINAL BLOCK (IN LESU)
<< F KEYBOARD OR REC. ONLY BASE CONNECTOR
<< R TYPING UNIT CONNECTOR
<< S STUNT BOX CONNECTOR
O JE SMD TERMINALS

OPTIONS: 1 470 µF

A EXTERNAL CIRCUITRY SUPPLIED BY CUSTOMER.
B STRAP IS USED ON REC. ONLY BASE (LB4/146)
C USED ON REC. ONLY SET
D HORIZONTAL TAB (LP120 ONLY)
E VERTICAL TAB (LP119 & LP120)

3. ALL APPARATUS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.

4. A. RESISTANCE VALUES IN OHMS
B. INDUCTANCE VALUES IN MICROHENRIES (µH)
C. CAPACITANCE VALUES IN MICROFARADS (µF)

5. FOR MOTOR WIRING DIAGRAM, SEE 2900WD.

6. SELECTOR MAGNET DRIVER, 304605, WIRED FOR .060 AMP. NEUTRAL SIGNAL. FOR OTHER CURRENT OPTIONS, SEE 7175WD SCHEMATIC WIRING DIAGRAM.

7. MARGIN INDICATOR IS NOT USED ON REC. ONLY BASE (LB4/146).

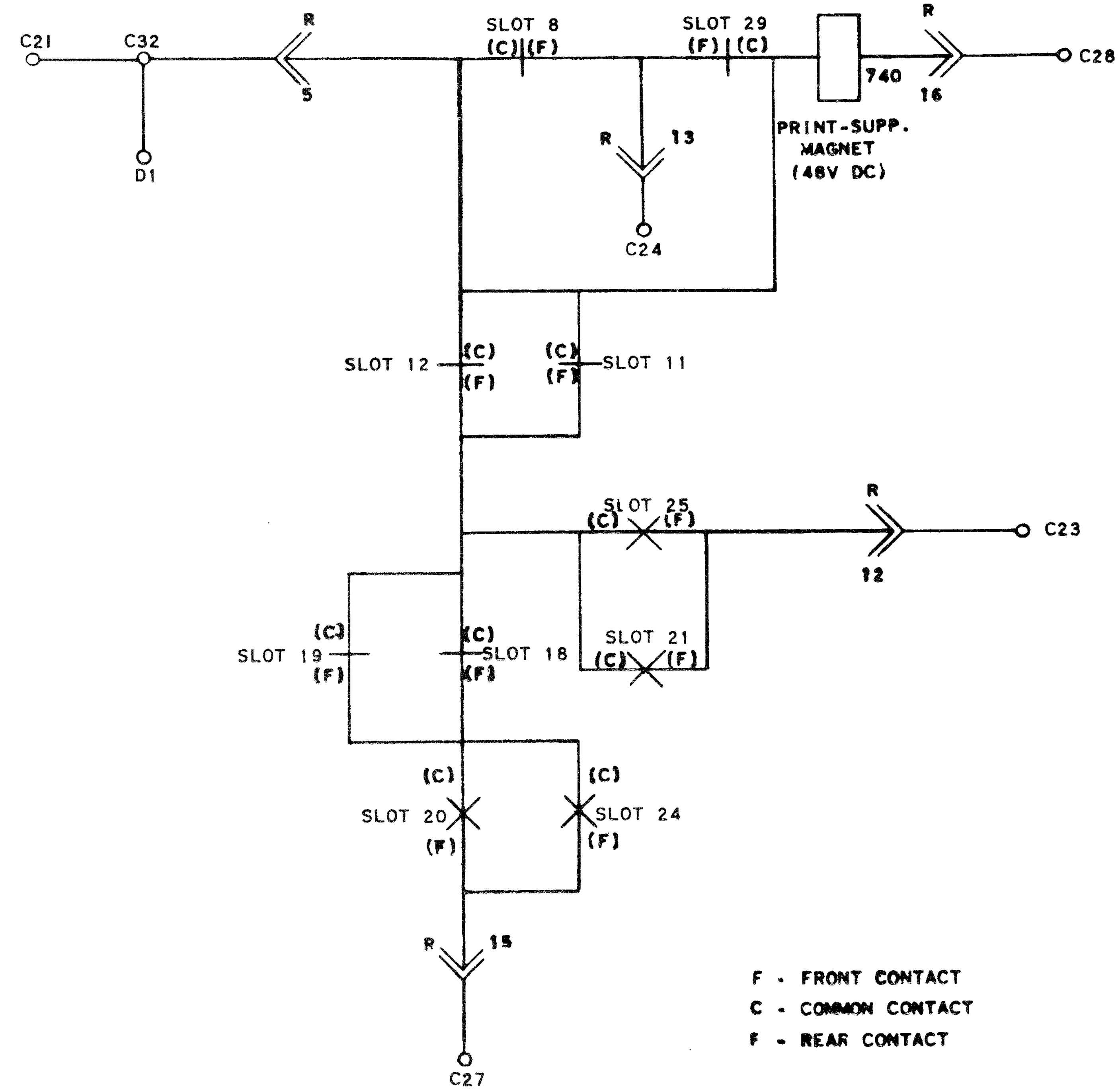
8. STUNT BOXES AJM, AJN AND AJP ARE USED WITH LP118, LP119 AND LP120 IN THE KSR SET.

9. STUNT BOX AJQ IS USED WITH LP121 IN THE REC. ONLY SET.

11. FOR SCHEMATIC WIRING DIAGRAM OF 199876 RECTIFIER, SEE 7121WD. FOR 305631 RECTIFIER SEE 7287 WD.

ET-08147
TC23516-561

STUNT BOX AJO
(NOTE 9)



7157 WD

ISSUE	DATE	AUTH. NO.
2	4-14-64	81753
3	4-29-64	81756
4	5-14-64	81758
5	1-7-65	84189

SHEET 4 OF 4

SCHEMATIC
WIRING DIAGRAM
FOR MODEL 28
LESU113

APPROVALS

D AND R: HGK 3-26-64
E OF M: C 7
E NUMBER
PROD. NO. 7157WD

DATE: 1-8-64
P.D. FILE NO. 11-A25AA
DRAWN. PJS
CHKD.
ENGD. FGH
APPD.

TELETYPE
CORPORATION

5 7157 WD

ISSUE CONTROL RECORD

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

SHEET NO.	ISSUE 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	X	X	X	X	X	X												
2	X	X	X	X	X	X												

7158 WD

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
1	4-7-66	90222
2	10-26-67	90222-1-8

ISSUE CONTROL
SHEET 1 OF 1

ACTUAL WIRING DIAGRAM FOR MODEL 28 ELECTRICAL SERVICE UNIT (ASR SET)
LESU 112

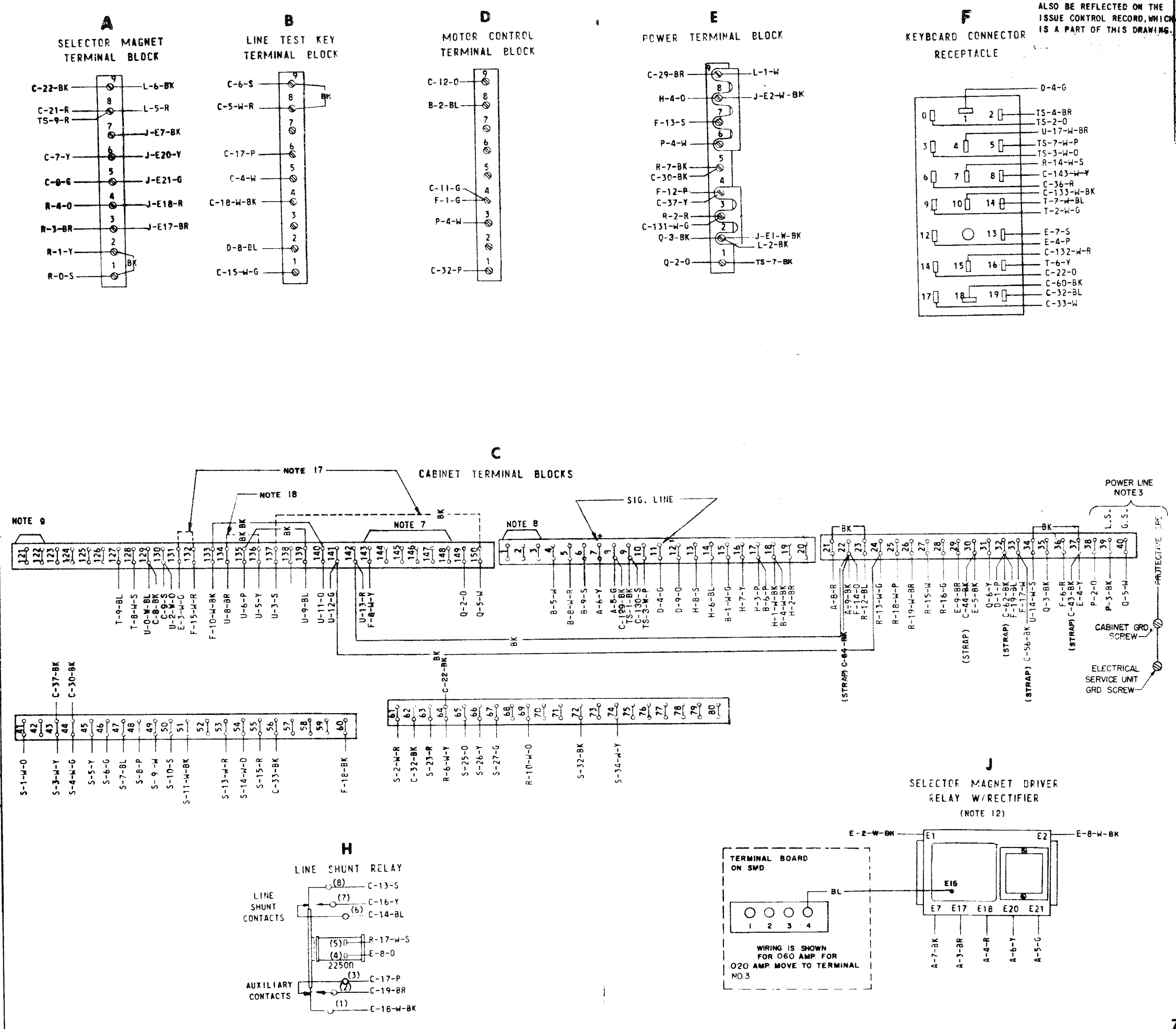
WD NUMBER 7158 WD	
DRAWN DGS	CHKD.
ENGD. FGH	APPD.

TELETYPE
CORPORATION

7158 WD

TC 482 8-63 SEE R&D ROUTINE #5

NO.	NOTES
1.	WIRING LEGEND: A-1-W-BL — A: DISTANT TERMINATING AREA; 1: DISTANT TERMINATING DESIGNATION; W-BL: WIRE COLOR CODE
2.	COLOR CODE: BK - BLACK, G - GREEN BR - BROWN, BL - BLUE R - RED, P - PURPLE O - ORANGE, W - WHITE Y - YELLOW, S - SLATE
3.	UNIT WIRED FOR 115 VOLTS, 60 CYCLE AC POWER ONLY.
4.	CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
5.	CIRCUITS SHOWN FOR .060 AMP. NEUTRAL SIGNAL LINE OPERATION. FOR .020 AMP. OPERATION, REMOVE CONNECTION K1 TO K2.
6.	THE SPARE LEADS FROM THE TRANSMITTER DISTRIBUTOR UNIT CONNECTOR PLUG ARE TERMINATED IN THE RIGHT END OF THE ELECTRICAL SERVICE UNIT. THE SPARE LEADS FROM THE TYPING UNIT PLUG ARE TERMINATED IN THE LEFT END OF THE ELECTRICAL SERVICE UNIT.
7.	TERMINALS C-143 TO C-148 RESERVED FOR CABINET LAMP OPERATION.
8.	TERMINALS C1 TO C3 RESERVED FOR CUSTOMER'S USE.
9.	TERMINALS C-121 TO C-122 RESERVED FOR PERFORATOR LOW TAPE SWITCH.
10.	CONTACTS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITION.
11.	SPARE LEADS SHOULD BE TAPED AND TIED BACK TO 157260 CABLE (PART OF 154741 MOD. KIT FURNISHED WITH TYPING UNIT.)
12.	FOR SCHEMATIC WIRING DIAGRAM OF 304605 SELECTOR MAGNET DRIVER, REFER TO 7175WD.
13.	FOR SCHEMATIC WIRING DIAGRAM, SEE 7159WD.
14.	TERMINAL DESIGNATIONS ENCLOSED IN PARENTHESES ARE NOT MARKED ON COMPONENTS.
15.	ASSOCIATED CABLES: 304686 MAIN CABLE (LESU) 157260 CABLE (PART OF MOD. KIT 154741)
16.	FOR SCHEMATIC WIRING DIAGRAM OF 199876 RECTIFIER, REFER TO 7127WD. FOR 305631 RECTIFIER, REFER TO 7287WD.
17.	TO OPERATE TD CIRCUIT ON OPTIONAL POWER, REMOVE STRAPS AT C131 & C132, AND C137 & C150. 48V DC CURRENT MUST BE LIMITED TO 100 MA. BY AN EXTERNAL RESISTOR.
18.	ALL EXTERNAL CIRCUITRY TO BE SUPPLIED BY CUSTOMER



NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

7158 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
~~A~~ 2	4-10-64	81160
~~B~~ 3	4-15-64	81755
4	5-14-64	81758
5	1-7-65	84189
6	12-11-65	89127
7	4-7-66	90222

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 1

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL SERVICE UNIT
(ASR SET)
LESU112

APPROVALS	
D AND R	E OF M
------	------

E-NUMBER
PROD. NO. 7158WD
DATE 2-19-64
P.D. FILE NO. 11-A25AA
DRAWN P.J.S. CHKD.
ENGD. F.G.H. APPD. E.J.C.

TELETYPE
CORPORATION

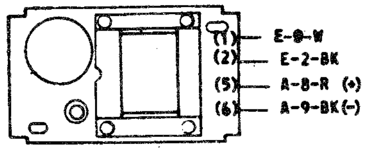
7

7158 WD

SEE SHEET 1 FOR NOTES.

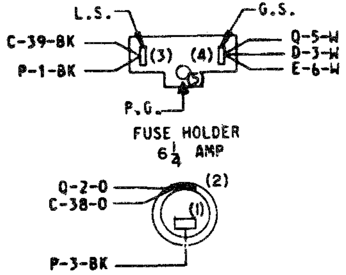
L

RECTIFIER ASSEMBLY
(NOTE 16)



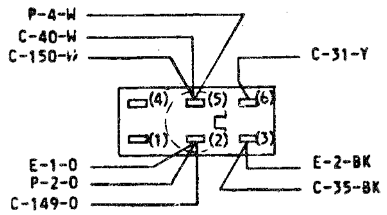
P

CONVENIENCE
RECEPTACLE



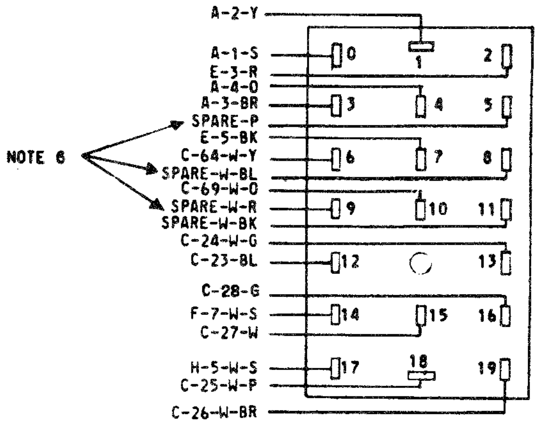
Q

POWER SWITCH



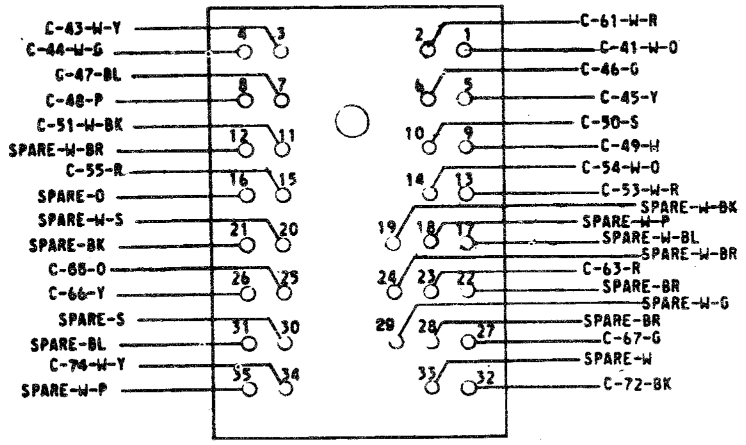
R

TYPING UNIT CONNECTOR
RECEPTACLE



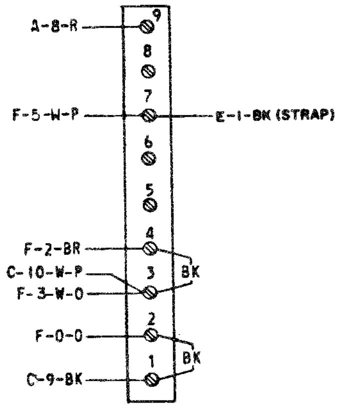
S

RIGHT CONNECTOR
AND CABLE ASSEMBLY
(NOTE 11)



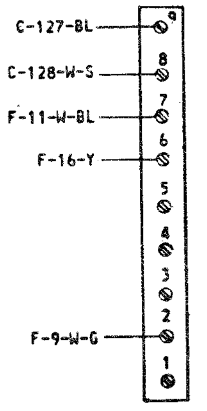
TS

SLOW RELEASE RELAY
TERMINAL BLOCK



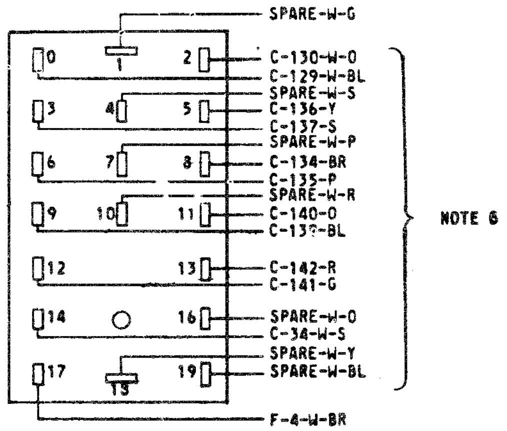
T

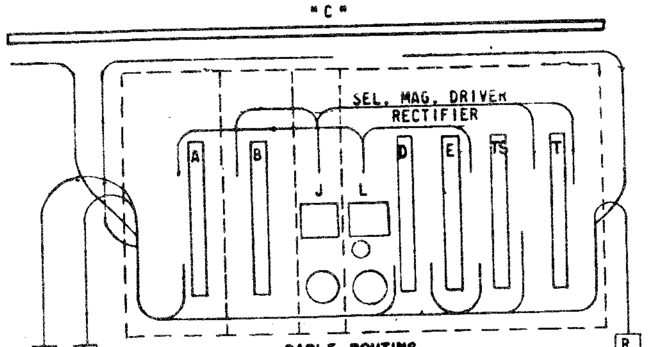
SLOW RELEASE TEST KEY
TERMINAL BLOCK



U

TRANSMITTER DISTRIBUTOR
CONNECTOR RECEPTACLE





CABLE ROUTING
(BOTTOM VIEW)

7158WD

NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS A PART OF THIS DRAWING.

REVISIONS

ISSUE	DATE	AUTH. NO.
A 2	4-10-64	81160
B 3	4-15-64	81755
4	5-14-64	81756
5	1-7-65	84189
6	4-7-66	90222
7	10-26-67	90222-1-B

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D. **SHEET 2**

ACTUAL
WIRING DIAGRAM
FOR
MODEL 28
ELECTRICAL SERVICE UNIT
(ASR SET)
LESU112

APPROVALS

D AND R	E OF M
------	------

E-NUMBER

PROD. NO. 7158WD

DATE 2-19-64

P.D. FILE NO. 11-A25AA

DRAWN P.J.S.	CHKD.
ENGD. F.G.H.	APPD. E.J.C.

TELETYPE
CORPORATION

7158WD

7

AC POWER CIRCUIT

SEE SHEET 3 FOR NOTES

7159 WD

REVISIONS

	DATE	AUTH. NO.
1	[illegible]	[illegible]
2	[illegible]	[illegible]
3	1-7-66	34159

SHEET 1 OF 3

SCHEMATIC WIRING
DIAGRAM FOR
MODEL 28
ASR SET (LESU112)

APPROVALS

PROD. NO. 7159WD

DATE: 1-9-63

RD. FILE NO. 11A25AA

DRAWN PJS

CHKD [illegible]

ENGD. FGH

APPD [illegible]

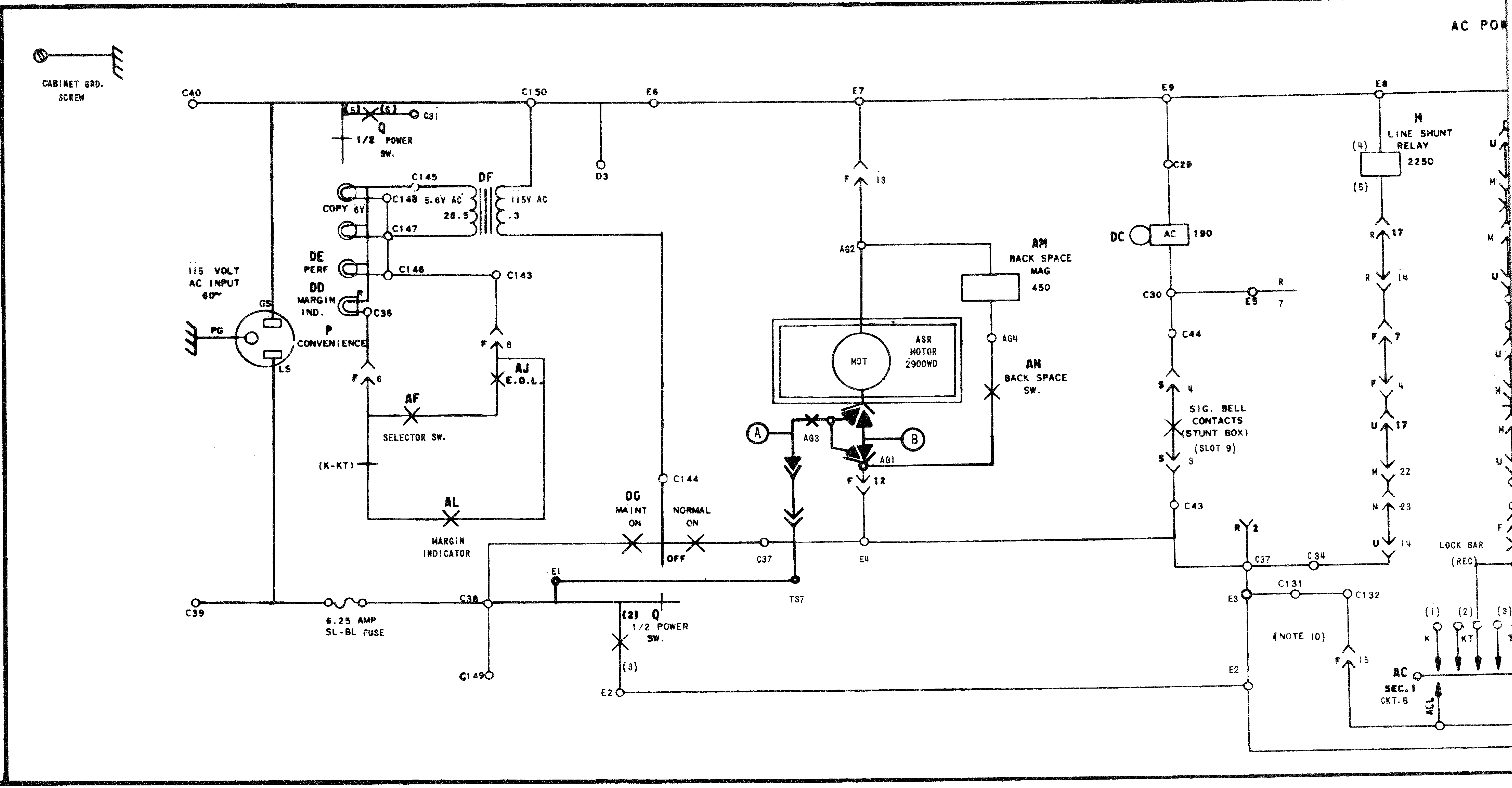
TELETYPE
CORPORATION

4

7159 WD

4½ x 10¾

R3½



AC POW
CABINET GRD. SCREW
C40
C150
E6
E7
E9
E8
(5) (6) Q C31
1/2 POWER SW.
D3
C145
DF
C148
5.6V AC
28.5
115V AC
.3
COPY 6V
C147
DE
PERF
C146
C143
DD
MARGIN IND.
R
C36
115 VOLT AC INPUT 60~
GS
PG
LS
P
CONVENIENCE
F 6
F 8
AJ
E.O.L.
AF
SELECTOR SW.
(K-KT)
AL
MARGIN INDICATOR
C144
F 13
AG2
AM
BACK SPACE MAG
450
AG4
AN
BACK SPACE SW.
MOT
ASR MOTOR 2900WD
A
AG3
B
AG1
F 12
DG
MAINT ON
NORMAL ON
OFF
C37
E4
E1
TS7
C39
6.25 AMP SL-BL FUSE
C38
(2) Q
1/2 POWER SW.
(3)
C149
E2
C29
DC
AC
190
C30
E5
R
7
C44
S 4
SIG. BELL CONTACTS (STUNT BOX)
(SLOT 9)
S 3
C43
H
LINE SHUNT RELAY
2250
(4)
(5)
R 17
R 14
F 7
F 4
U 17
M 22
M 23
U 14
R 2
C37
C34
E3
C131
C132
(NOTE 10)
F 15
E2
LOCK BAR (REC)
(1)
(2)
(3)
K
KT
T
AC
SEC. 1
CKT. B
ALL
U
M
F

7159 WD

REVISIONS		
ISSUE	DATE	AUTH. NO.
2	4-10-64	81180
3	5-14-64	81738

SHEET 2 OF 3

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
ASR SET
(LESU112)

APPROVALS
3-24-64 C1

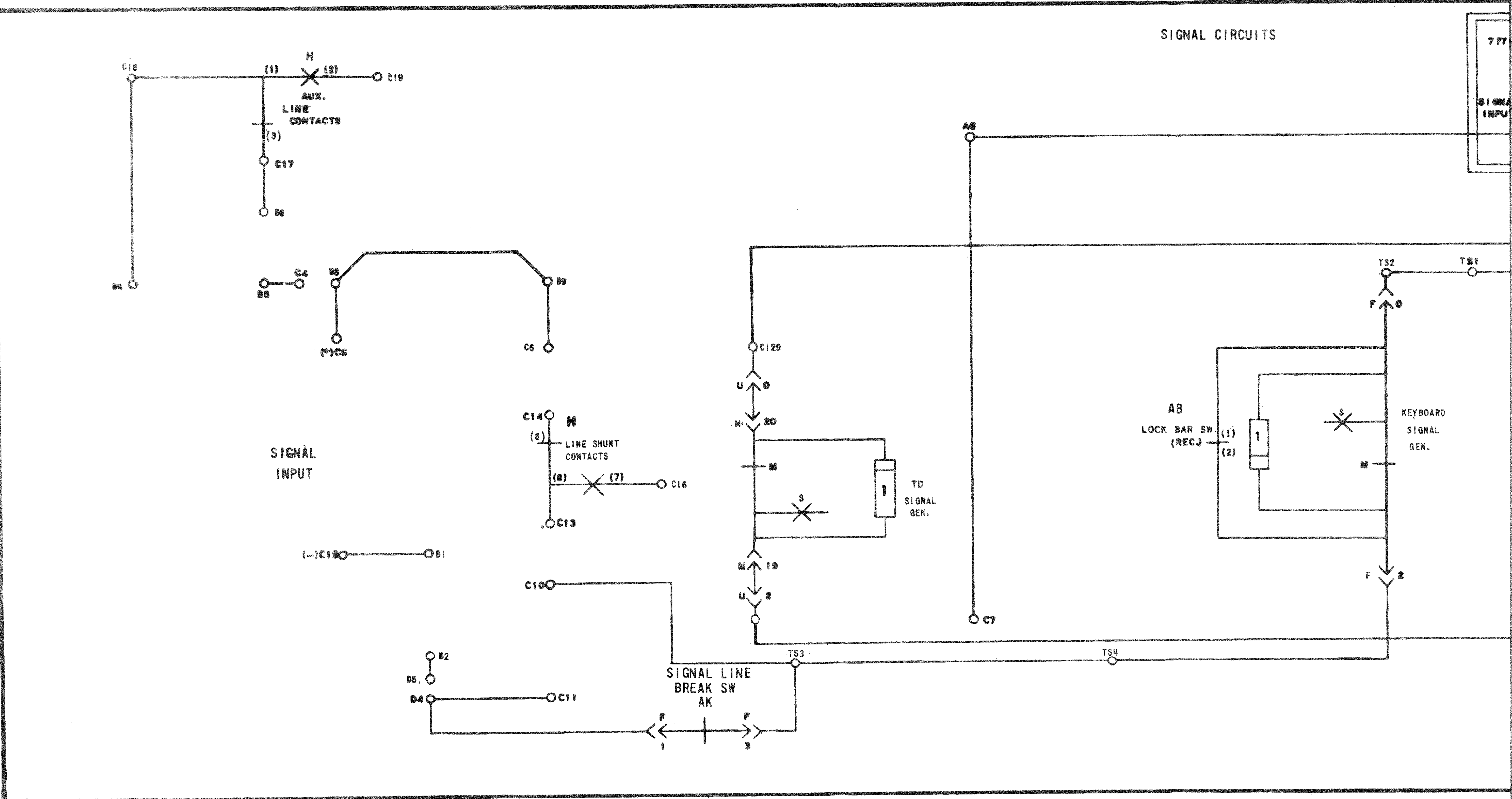
PROD. NO. 7159WD
DATE: 2-17-64
P.D. FILE NO. 11-A25AA
DRAWN P.J.S. CHKD. TDC
ENGD. F.G.H. APPD.

TELETYPE
CORPORATION

3 7159 WD

4¼ X 10¾

R 3½



SIGNAL CIRCUITS
C18
(1)
H
(2)
C19
AUX.
LINE
CONTACTS
(3)
C17
B6
B4
C4
B5
B8
B9
(+)C5
C6
SIGNAL
INPUT
C14
M
(6)
LINE SHUNT
CONTACTS
(8)
(7)
C16
C13
(–)C15
B1
C10
B2
B6
D4
C11
SIGNAL LINE
BREAK SW
AK
F
1
F
3
TS3
TS4
C12S
U
0
M
20
M
S
1
TD
SIGNAL
GEN.
M
19
U
2
A6
C7
TS2
TS1
F
0
AB
LOCK BAR SW.
(REC.)
(1)
(2)
1
S
KEYBOARD
SIGNAL
GEN.
M
F
2
SIGNA
INPU
7 7

NOTES

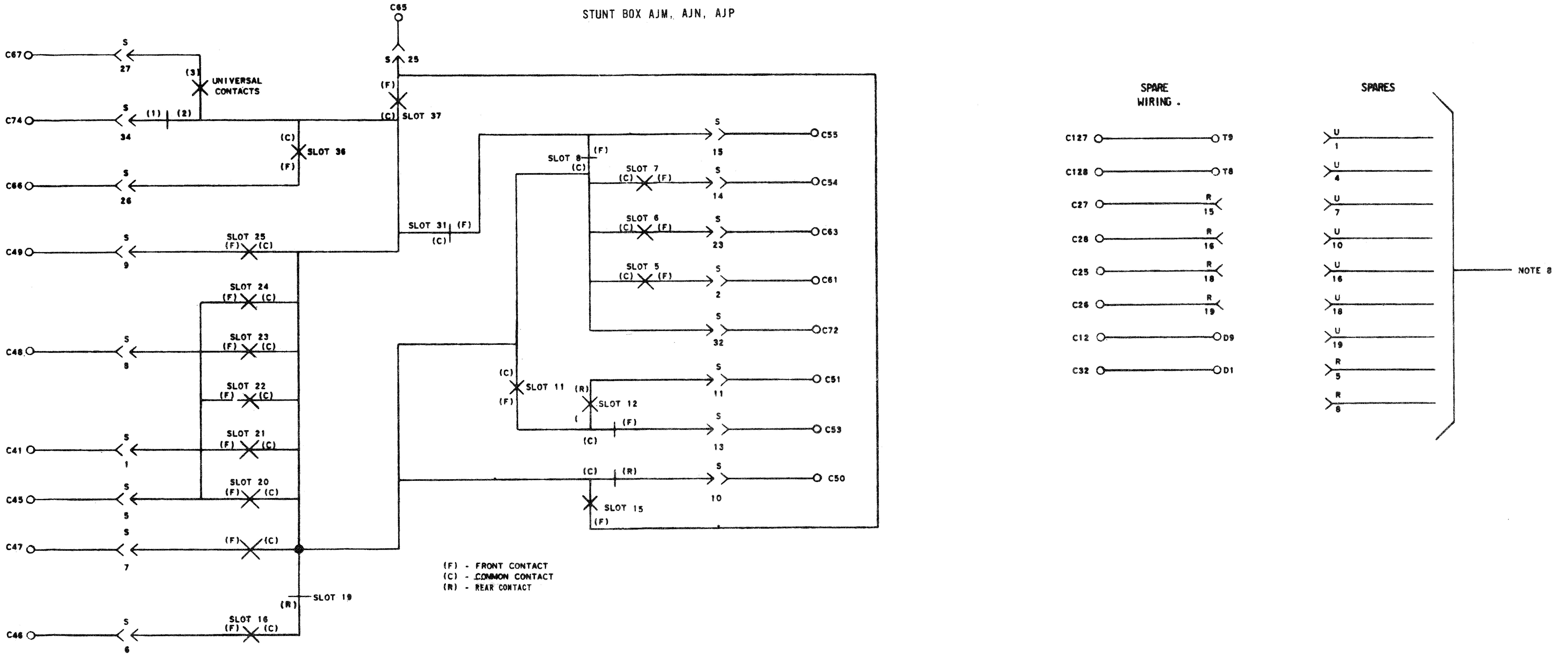
IS ENCLOSED IN PARENTHESES
ND NOT MARKED ON COMPONENT.

ND TIED BACK TO MAIN CABLE

VER WIRED FOR .060 AMP.
ATION. FOR OTHER CURRENT
SCHEMATIC WIRING DIAGRAM.

IT ON OPTIONAL POWER,
31 & C132 AND C137 & C150.
BE LIMITED TO 100MA BY AN
.

STUNT BOX AJM, AJN, AJP



(F) - FRONT CONTACT
(C) - COMMON CONTACT
(R) - REAR CONTACT

7159 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
2	4-10-64	81160
3	4-29-64	81756
4	5-14-64	81756
5	1-7-65	84189

SHEET 3 OF 3

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28
ASR SET
(LESU112)

APPROVALS

D and R | E or M

PROD. NO. 7159WD

DATE: 3/2/64

RD. FILE NO. 11-A25AA

DRAWN PJS | CHKD.

ENGD. FGH | APPD.

TELETYPE
CORPORATION

7159 WD

R3½

NO	NOTES
1.	FOR ASSOCIATED WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE.

WD NO.	UNITS OPERABLE WITH LESU
3302WD	KEYBOARD LAK44
3264WD	CABINET LAAC236
2900WD	MOTOR UNIT LMU12 & LMU14
7020WD	PAGE TYPING UNIT LP118,LP119,LP120
7158WD	ELECTRICAL SERVICE UNIT LESU112
3573WD	TRANSMITTER DISTRIBUTOR LXD26
3571WD	TRANSMITTER DISTRIBUTOR BASE LCXB8
7175WD	304605 SELECTOR MAGNET DRIVER RLY
7287WD	305631 RECTIFIER
7127WD	199876 RECTIFIER

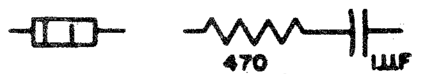
2. LEGEND:

O A	SELECTOR MAGNET TERMINAL BLOCK (IN LESU)
O B	LINE TEST KEY TERMINAL BLOCK (IN LESU)
O C	CABINET TERMINAL BLOCK
O D	MOTOR CONTROL TERMINAL BLOCK (IN LESU)
O E	POWER TERMINAL BLOCK (IN LESU)
<< F	KEYBOARD CONNECTOR
O K	TERMINAL STRIP ON LINE TEST KEY-(LESU)
<< M	TRANS. DIST. & BASE CONNECTOR
<< R	TYPING UNIT CONNECTOR
<< S	STUNT BOX CONNECTOR
O TS	SLOW RELEASE RELAY TERMINAL BLOCK (IN LESU)
O T	SLOW RELEASE TEST KEY TERMINAL BLOCK (IN LESU)
<< U	TRANSMITTER DISTRIBUTOR CONNECTOR
O AG	MOTOR TERMINAL BLOCK (ON LAK)
O AH	AUX. SWITCH TERMINAL BLOCK (ON LAK)

>——INDICATES FEMALE AND ——>

INDICATES MALE TERMINALS ON CONNECTORS

3. 188A NETWORK



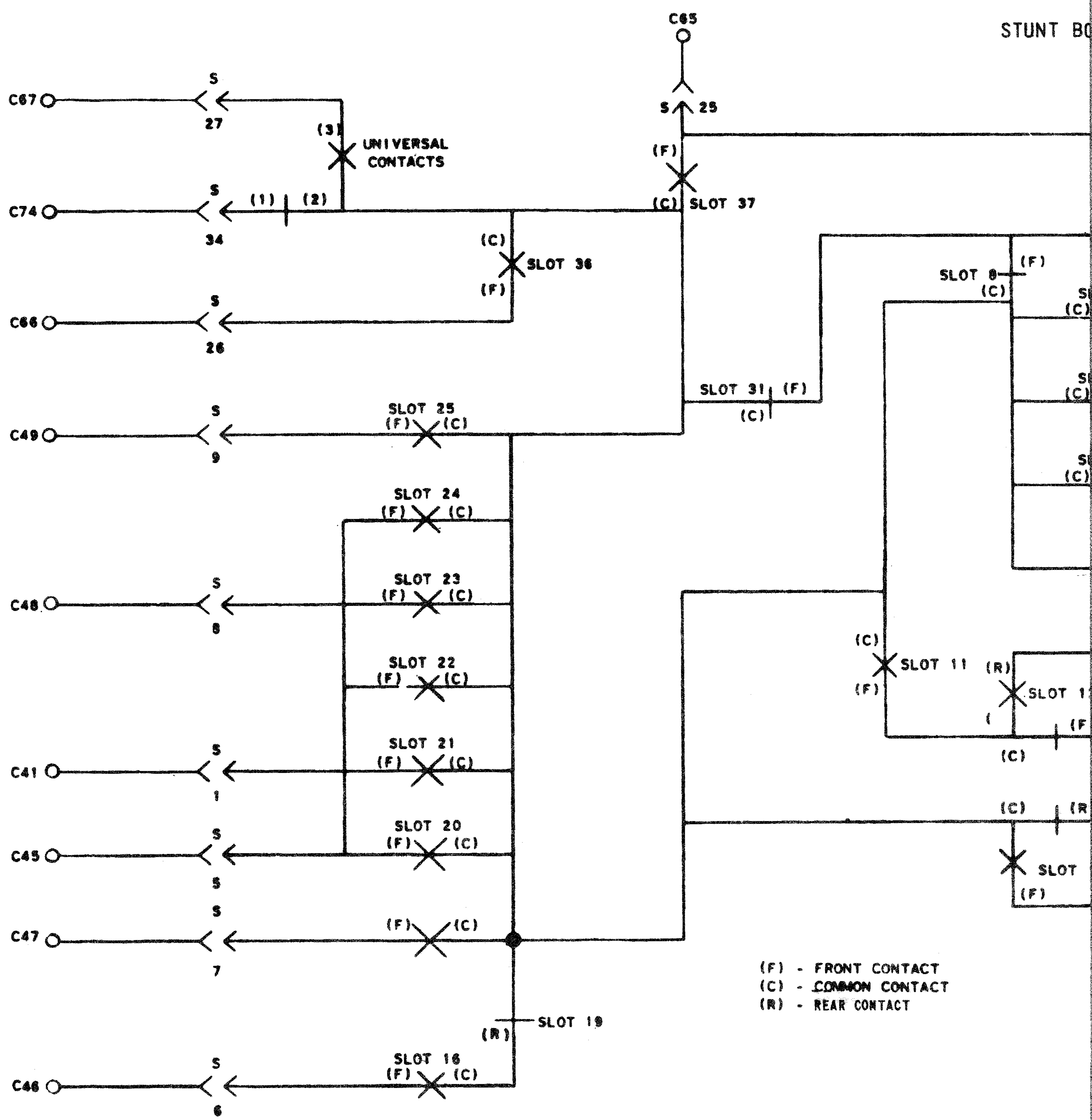
4. OPTIONS:

- A PAPER FEED SWITCH (WHEN REQUIRED BY CUSTOMER)
- B WHEN PAPER FEED OUT SWITCH IS NOT USED
- C HORIZONTAL TAB (USED ON LP120 TYPING UNIT)
- D VERTICAL TAB (USED ON LP119 & LP120)
- E EXTERNAL CIRCUITRY SUPPLIED BY CUSTOMER

5. ALL APPARATUS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITIONS.

6\.
- A. RESISTANCE VALUES IN OHMS
- B. INDUCTANCE VALUES IN MICROHENRIES (µH)
- C. CAPACITANCE VALUES IN MICROFARADS (µF)

	NOTES
7.	TERMINAL DESIGNATIONS ENCLOSED IN PARENTHESES ARE FOR REFERENCE AND NOT MARKED ON COMPONENT.
8.	SPARE LEADS TAPED AND TIED BACK TO MAIN CABLE ASSEMBLY.
9.	SELECTOR MAGNET DRIVER WIRED FOR .060 AMP. NEUTRAL SIGNAL OPERATION. FOR OTHER CURRENT OPTIONS SEE 7175WD SCHEMATIC WIRING DIAGRAM.
10.	TO OPERATE TD CIRCUIT ON OPTIONAL POWER, REMOVE STRAPS AT C131 & C132 AND C137 & C150. 48V DC CURRENT MUST BE LIMITED TO 100MA BY AN EXTERNAL RESISTANCE.



ISSUE CONTROL RECORD

7762 WD

NO.	NOTES	SUPPORTING INFORMATION		CONTENTS
		CATEGORY	NO.	

SHEET NO.	ISSUE																	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	X	X	X															
2	X	X	X															
3	X	X	X															

REVISIONS APPLYING TO THIS CONTROL RECORD

ISSUE	DATE	AUTH. NO.
1	4-13-66	90373
2	11-12-66	92126

ISSUE CONTROL
SHEET 1 OF 1

SCHEMATIC
WIRING DIAGRAM
FOR
MODEL 28 ASR SETS

VSL 515 (28A)
VSL 526(28B)

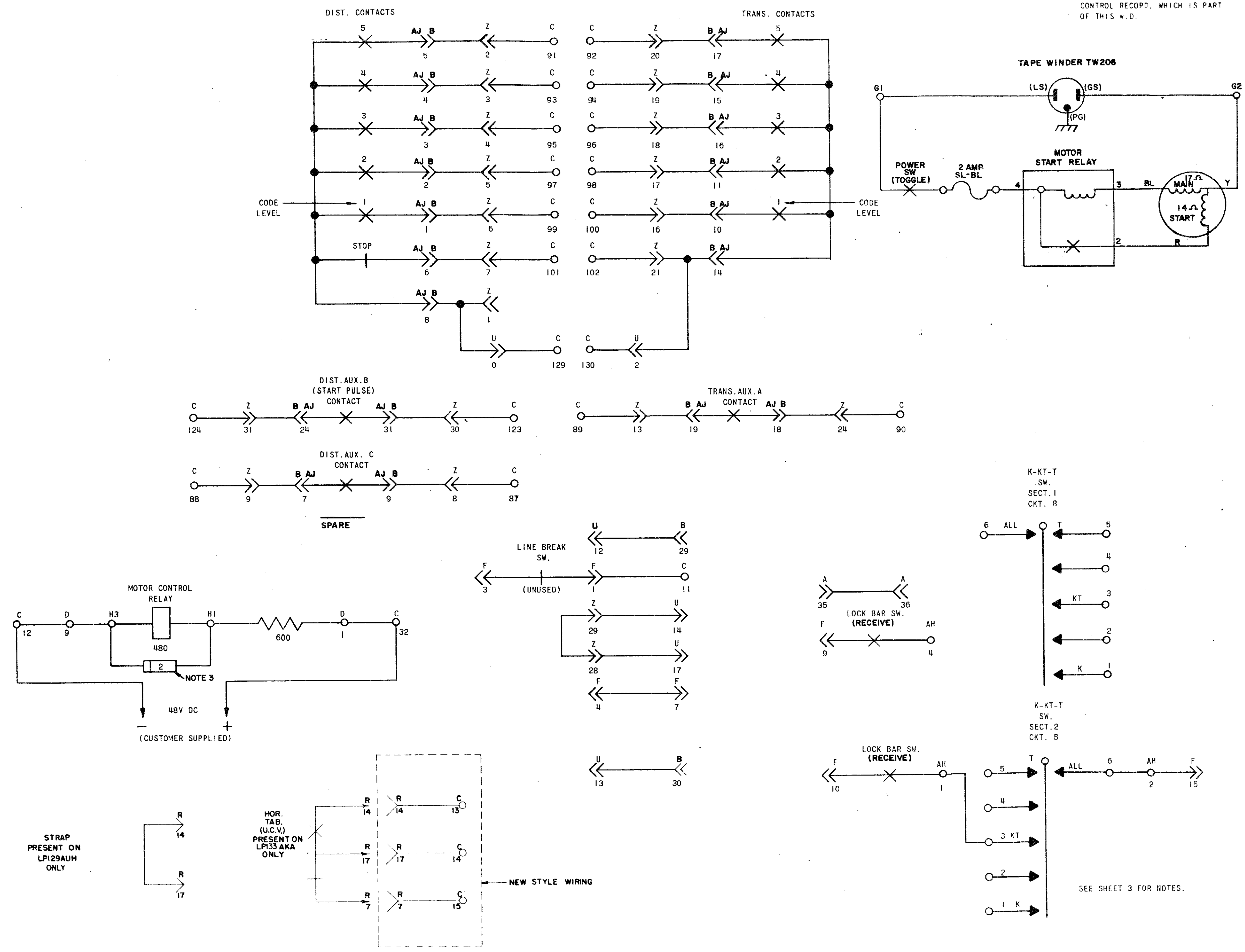
WD NUMBER 7762 WD	
DRAWN R.D.P.	CHKD. T.D.C.
ENGD. R.E.P.	APPD. R.R.S.

TELETYPE
CORPORATION

7762 WD

182 (8-66) SEE R&D ROUTINE #5
FOR USE OF THIS FORM

TRANSMITTER DISTRIBUTOR SIGNAL GENERATING CIRCUIT



NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS PART OF THIS W.D.

SEE SHEET 3 FOR NOTES.

7762 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
1	4-8-65	16768-R
2	9-9-65	87339
3	1-13-66	89018
4	4-13-66	90373

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 1

SCHEMATIC
WIRING DIAGRAM
FOR

MODEL 28 ASR SETS
VSL 515 (28A)
VSL 526 (28B)

APPROVALS

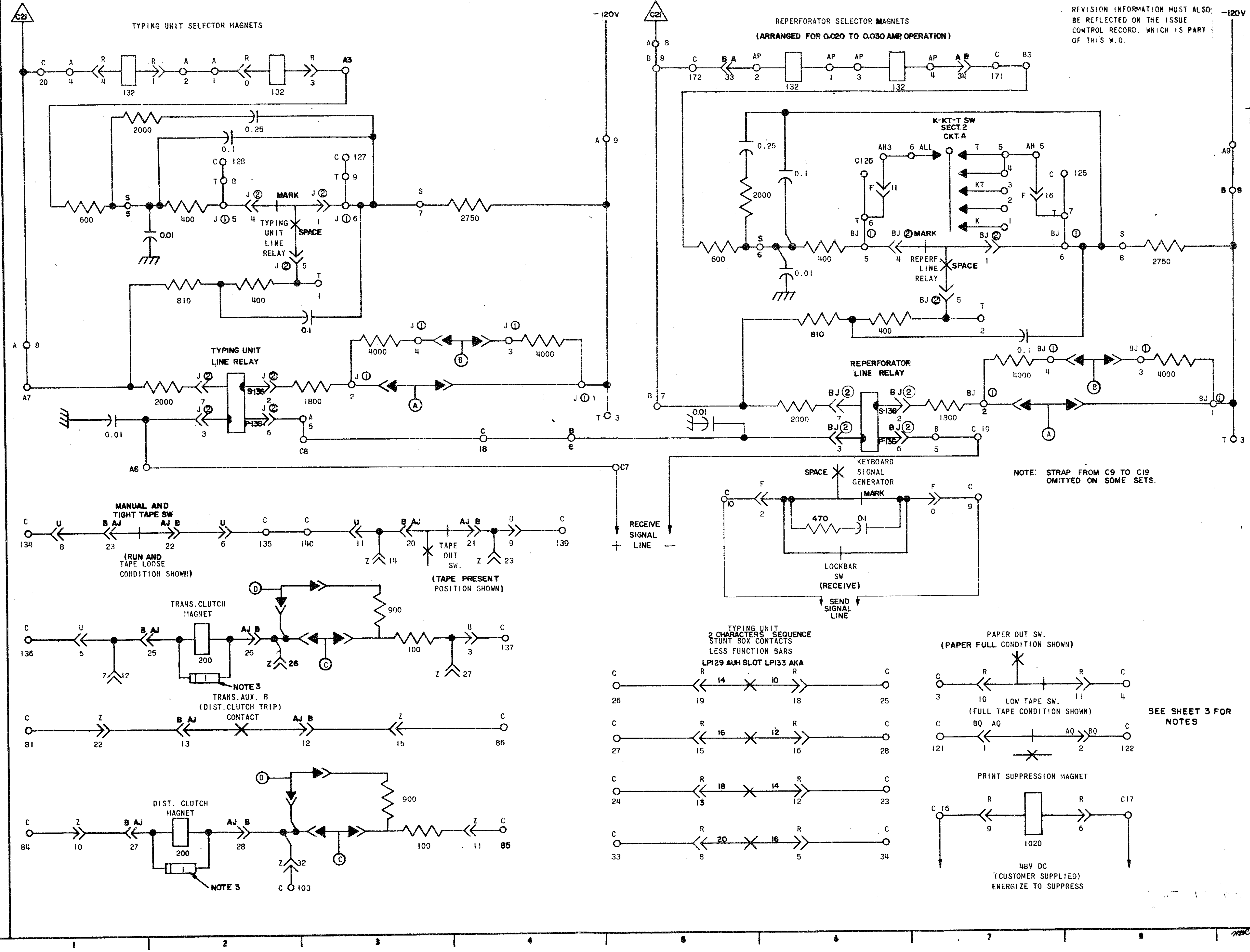
D AND R	E OF M
HJK	

E-NUMBER
PROD. NO. 7762WD
DATE 2-17-65
P.D. FILE NO. 26-58.65AA
DRAWN D.D.G. CHKD. N.B. Tol
ENGD. R.E.P. APPD. RRS

TELETYPE
CORPORATION

7762 WD

mk


C21
TYPING UNIT SELECTOR MAGNETS
-120V
132
A3
2000
0.25
0.1
600
400
2750
0.01
TYPING UNIT LINE RELAY
MARK
SPACE
810
400
4000
1800
TYPING UNIT LINE RELAY
S136
P136
A7
A6
C8
C7
REPERFORATOR SELECTOR MAGNETS
(ARRANGED FOR 0.020 TO 0.030 AMP. OPERATION)
K-KT-T SW. SECT.2 CKT.A
REPERF. LINE RELAY
REPERFORATOR LINE RELAY
KEYBOARD SIGNAL GENERATOR
LOCKBAR SW (RECEIVE)
RECEIVE SIGNAL + LINE −
SEND SIGNAL LINE
MANUAL AND TIGHT TAPE SW
(RUN AND TAPE LOOSE CONDITION SHOWN)
TAPE OUT SW.
(TAPE PRESENT POSITION SHOWN)
TRANS. CLUTCH MAGNET
NOTE 3
TRANS. AUX. B (DIST. CLUTCH TRIP) CONTACT
DIST. CLUTCH MAGNET
900
100
200
TYPING UNIT 2 CHARACTERS SEQUENCE STUNT BOX CONTACTS LESS FUNCTION BARS
LP129 AUH SLOT LP133 AKA
PAPER OUT SW. (PAPER FULL CONDITION SHOWN)
LOW TAPE SW. (FULL TAPE CONDITION SHOWN)
PRINT SUPPRESSION MAGNET
1020
48V DC (CUSTOMER SUPPLIED) ENERGIZE TO SUPPRESS

NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS PART OF THIS W.D.

NOTE: STRAP FROM C9 TO C19 OMITTED ON SOME SETS.

SEE SHEET 3 FOR NOTES

REVISIONS

ISSUE	DATE	AUTH. NO.
1	4-8-65	16768-R
2	9-9-65	87339
3	4-13-66	90373
4	11-12-66	92126

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 2

SCHEMATIC
WIRING DIAGRAM
FOR

MODEL 28 ASR SETS

VSL515 (28A)
VSL526(28B)

APPROVALS

D AND R	E OF M

E-NUMBER

PROD. NO. 7762WD

DATE 2-17-65

P.D. FILE NO. 26-58.65AA

DRAWN D.D.G.	CHKD.
ENGD. R.E.P.	APPD. RRS

TELETYPE
CORPORATION

7762 WD

NO.	NOTES

1. FOR ACTUAL WIRING DIAGRAMS OF INDIVIDUAL UNITS SEE:

WD NO.	UNIT
7764WD	CABINET LAAC249
7768WD	TAPE WINDER TW206
3495WD	MOD.KIT.RECTIFIER IN CABINET 160422
3619WD	BASE,TRANS.DIST. LCXB9
3536WD	TRANS. DIST. LBXD29
3494WD	HOUSING,TRANS. DIST. 160888
7767WD	VCL513 ,MODEL28 ASR SET LESS PRINTER
7766WD	ELEC.SERVICE UNIT LESU116
7763WD	TYPING UNIT LP129/AUH(VSL515 ONLY)
7765WD	KEYBOARD,ASR LAK49
3567WD	REPERF. TYPING LPR33
2900WD	MOTOR UNIT-LMU12(ACTUAL & SCHEM.)
7763WD	TYPING UNIT-LP133AKA (VSL526 ONLY)

2. LEGEND:

○ A TYPING UNIT LINE RELAY TERM. BLOCK (IN LESU)
○ B REPERF.LINE RELAY TERM.BLOCK(LESU).
○ G TAPE WINDER TERM. BLOCK.
○ C CABINET TERM.BLOCK
○ D MOTOR CONTROL TERM.BLOCK(IN LESU)
○ E POWER TERM.BLOCK(IN LESU)
—<<— F KEYBOARD CONNECTOR
○ H MOTOR CONTROL RELAY (IN LESU)
○ J ① TYPING UNIT LINE RELAY TERM. STRIP (IN LESU)
—<<— J ② TYPING UNIT LINE RELAY CONN.
○ L RECTIFIER TERM.BLOCK (IN LAAC)
—<<— R TYPING UNIT CONNECTOR
○ S SLOW RELEASE RELAY TERM.BLOCK (IN LESU)
○ T SEL.MAG.BLINDING TERM.BLOCK (IN LESU)
—<<— U TRANS.DIST.BASE-ELECT.SERVICE UNIT CONNECTOR
—<<— Z TRANS.DIST.BASE-CABINET CONN.
—<<— A-B REPERFORATOR CONNECTOR
○ AG MOTOR TERMINAL BLOCK(IN LAK)
○ AH KEYBOARD TERM. BLOCK (IN LAK)
—<<— AJ-B TRANS.DIST. CONNECTOR
○ AP REPERF.SEL.MAG.TERMINALS(IN LPR)
—<<— AQ-BQ LOW TAPE ALARM CONN. (IN LAK)
○ BJ ① REPERF.LINE RELAY TERM.STRIP (IN LESU)
—<<— BJ ② REPERF.LINE RELAY CONNECTOR
— -120V.NEGATIVE 120VDC AT C22.
▽ COMMON RETURN TO POS 120VDC AT C21.

3. NETWORK VALUES:

NET. NO.	WE CODE	RESISTANCE Ω	CAPACITANCE µF
1	186A	120	0.35
2	186A	470	0.13

4. ALL APPARATUS SHOWN IN UNOPERATED OR DE-ENERGIZED POSITION.

5. A. RESISTANCE IN OHMS -Ω
B. CAPACITANCE IN MICROFARADS -µF

6.

OPTIONS	WIRING
60 MILLAMPERE SIGNAL LINE	Ⓐ
20 MILLAMPERE SIGNAL LINE	Ⓑ
48V DC TRANS.AND DIST CLUTCH OPERATION	Ⓒ
115V DC TRANS.AND DIST. CLUTCH OPERATION	Ⓓ

EQUIPMENT IS FURNISHED WITH Ⓐ AND Ⓒ WIRING.

7. SL-BL INDICATES SLOW BLOWING.

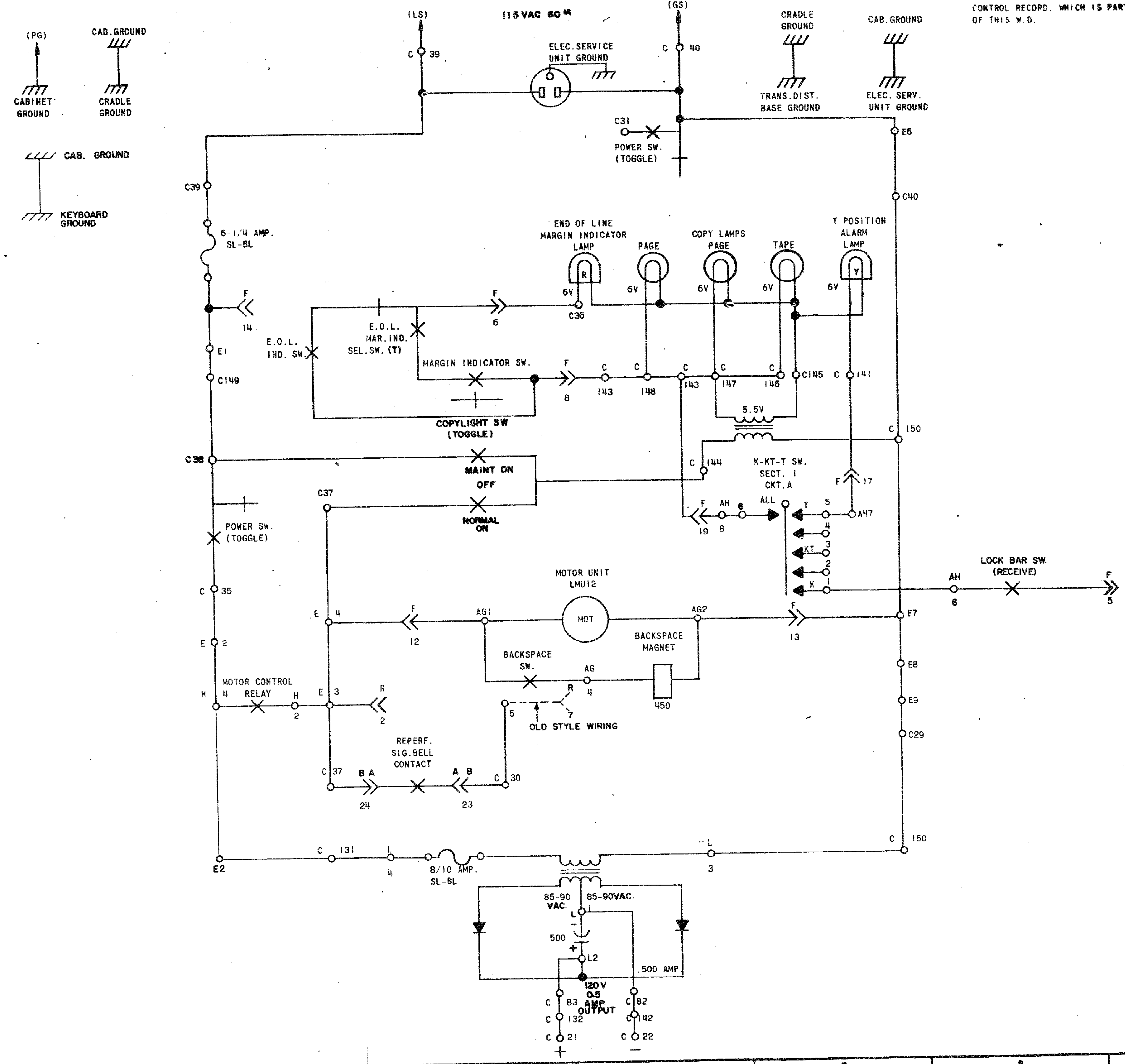
8.

9. ALL VOLTAGES DC UNLESS OTHERWISE SPECIFIED.

10. FOR TELETYPE PERSONNEL ONLY. TO OPERATE LBXD FOR TEST PURPOSES, FURNISH STRAPS ON THE CABINET TERMINAL BLOCKS AS FOLLOW:

C91-C92 C97-C98 C137-C139
C93-C94 C99-C100 C85-C86
C95-C96 C101-C102

FURNISH 48VDC: POS. ON C84 AND C136, NEG. ON C81 AND C134 TO OPERATE CLUTCH MAGNETS. MONITOR SIGNAL ON C129 AND C130. REMOVE STRAPS AFTER TEST.



NOTE:
REVISION INFORMATION MUST ALSO BE REFLECTED ON THE ISSUE CONTROL RECORD, WHICH IS PART OF THIS W.D.

7762 WD

REVISIONS

ISSUE	DATE	AUTH. NO.
1	4-8-65	16768-R
2	9-9-65	87339
3	1-13-66	89018
4	4-13-66	90373

SEE ISSUE CONTROL RECORD FOR COMPLETE LIST OF SHEETS COMPRISING THIS W.D.

SHEET 3

SCHEMATIC
WIRING DIAGRAM
FOR

MODEL 28 ASR SETS
VSL515 (28A)
VSL526(28B

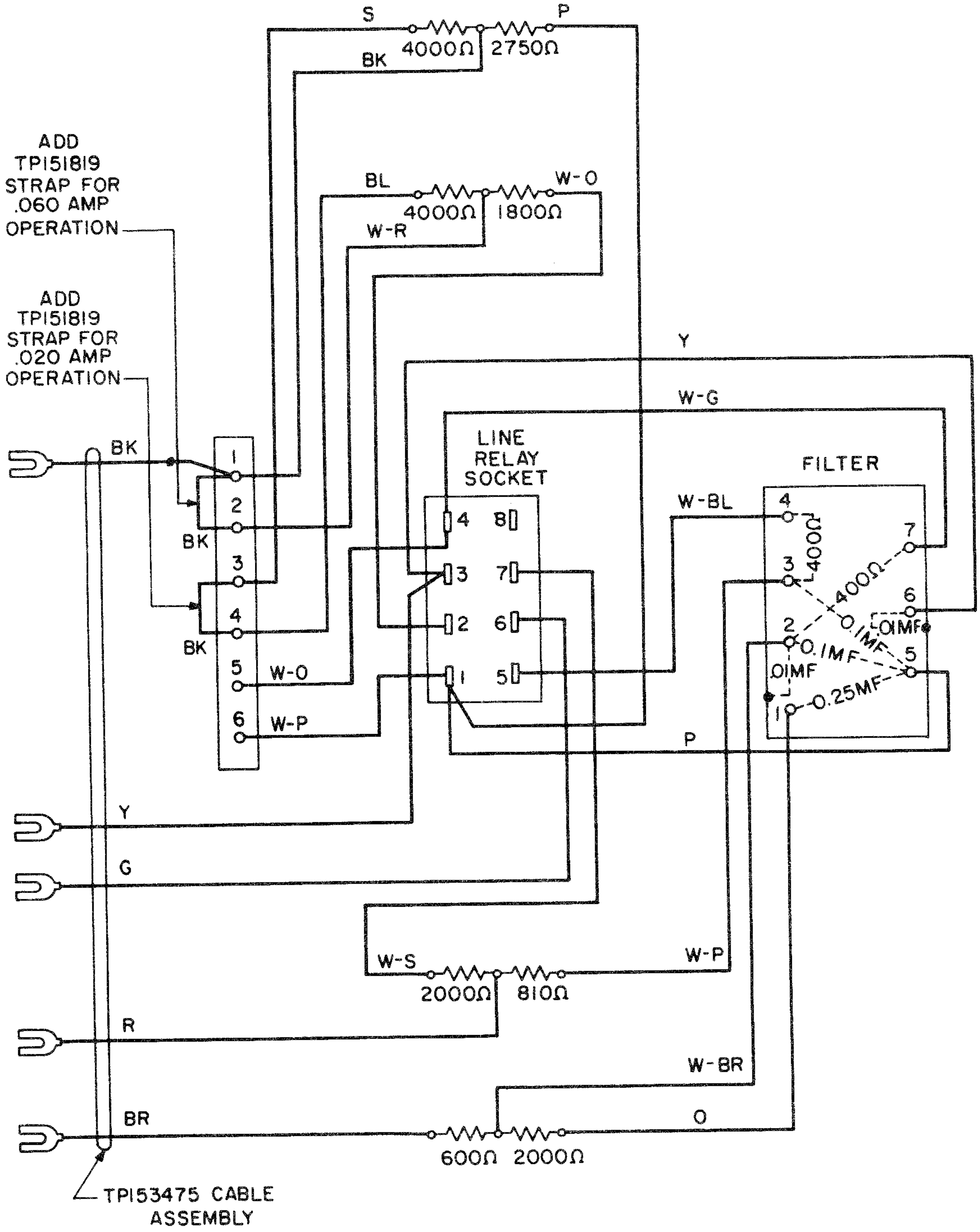
APPROVALS

D AND R	E OF M
HJR	

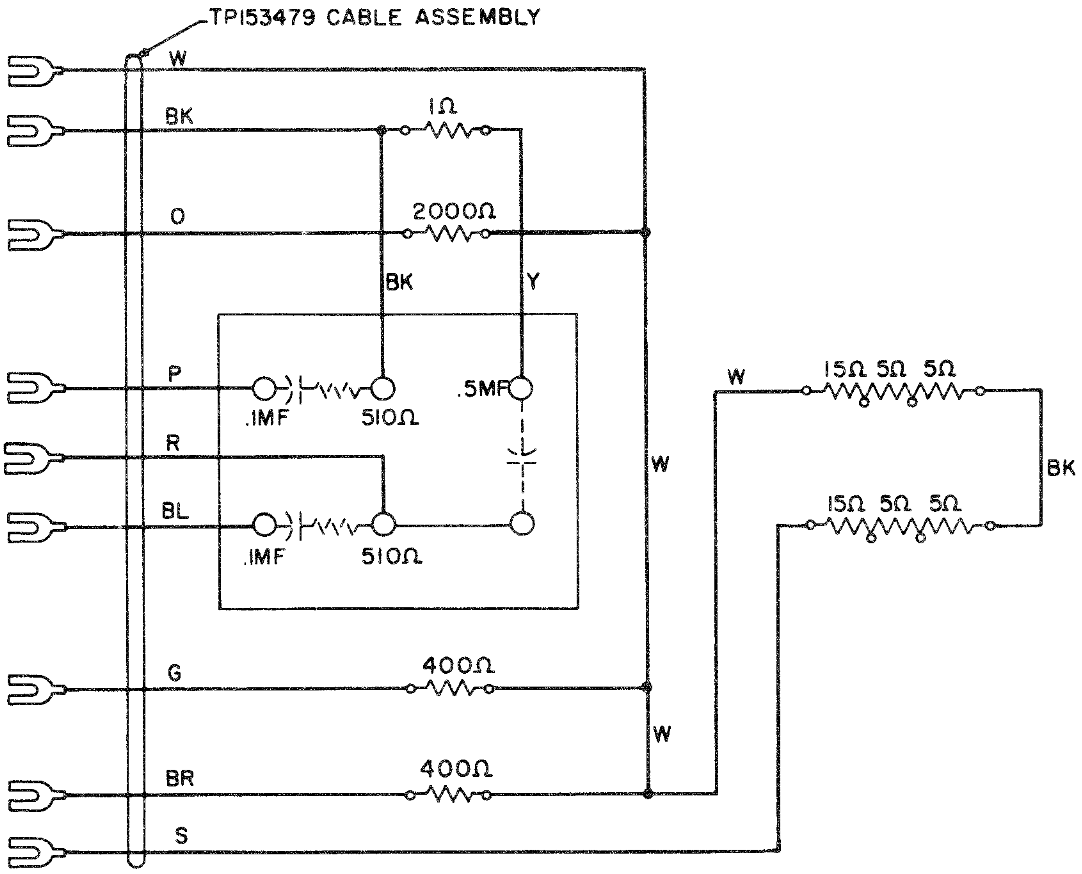
E-NUMBER
PROD. NO. 7762WD
DATE 2-17-65
P.D. FILE NO. 26-58.65AA
DRAWN D.D.G. CHKD. NB TRL
ENGD. R.E.P. APPD. RRS

TELETYPE
CORPORATION

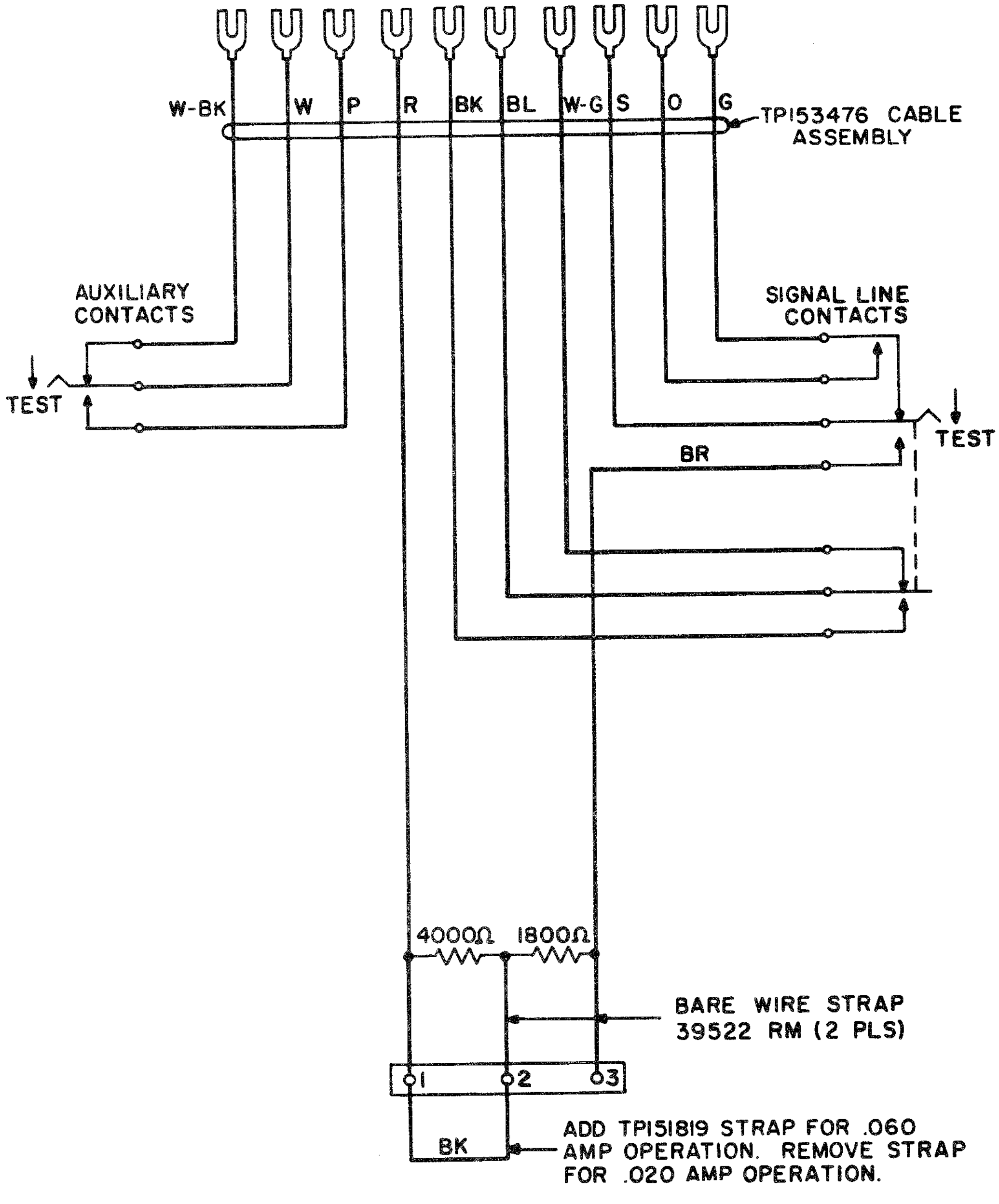
7762WD



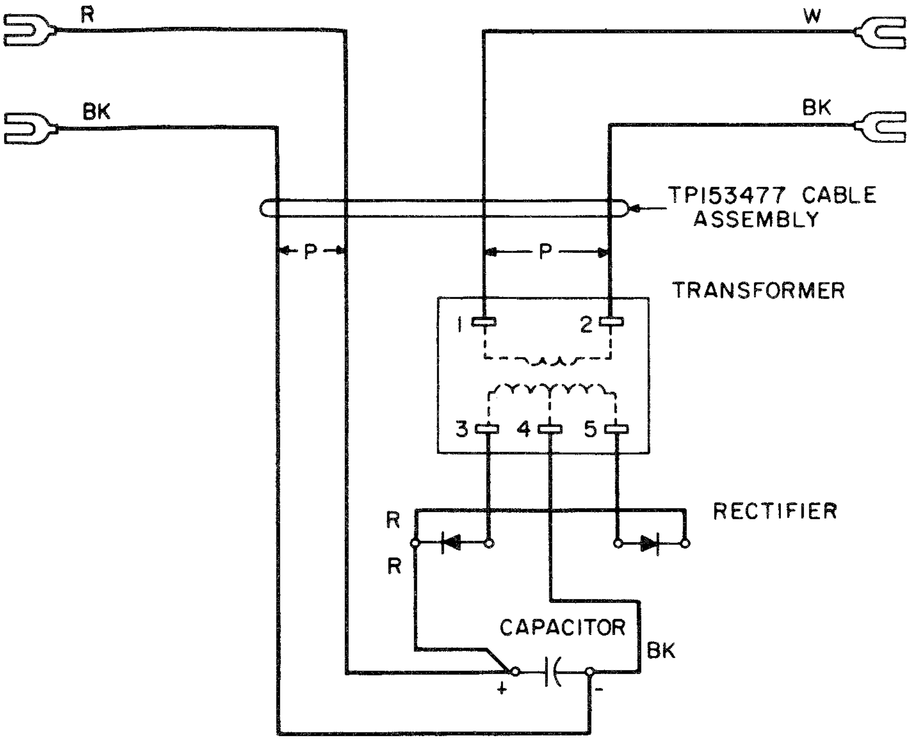
TP152623 Line Relay Mounting Assembly



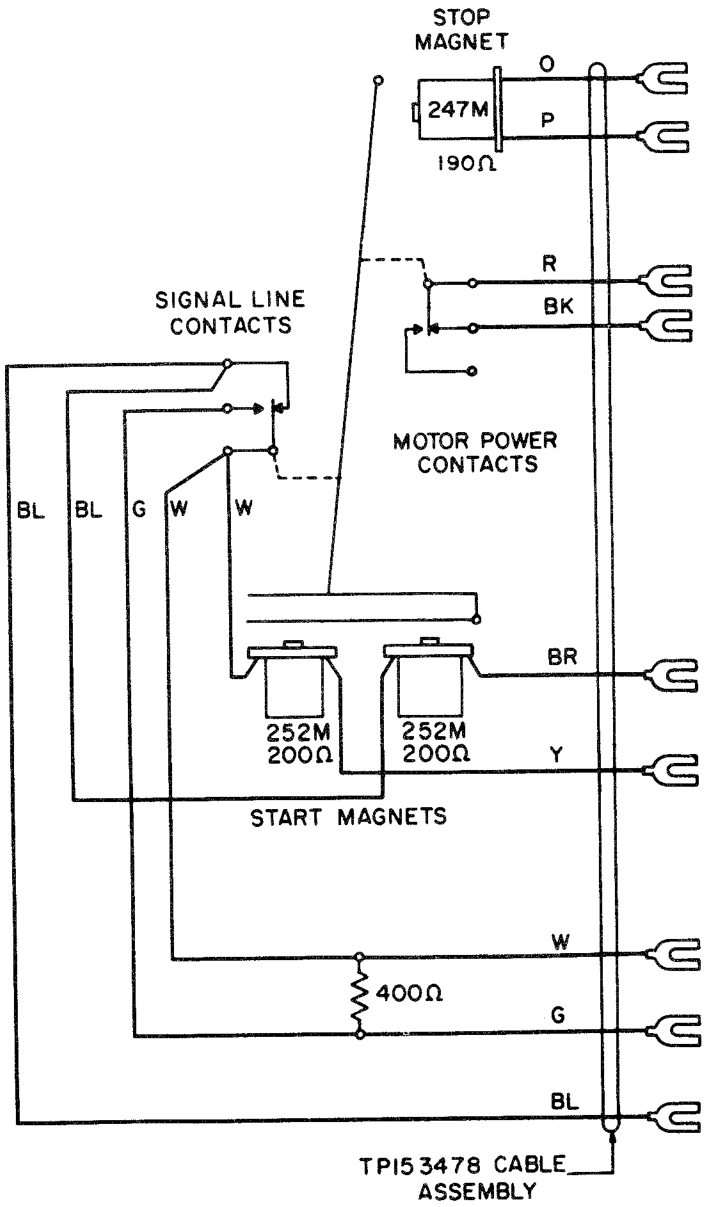
TP152624 Capacitor Resistor Assembly


W-BK
W
P
R
BK
BL
W-G
S
O
G
TP153476 CABLE ASSEMBLY
AUXILIARY CONTACTS
TEST
SIGNAL LINE CONTACTS
TEST
BR
4000Ω
1800Ω
BARE WIRE STRAP 39522 RM (2 PLS)
1
2
3
BK
ADD TP151819 STRAP FOR .060 AMP OPERATION. REMOVE STRAP FOR .020 AMP OPERATION.

TP152625 Line Test Key Assembly



TP152950 Rectifier Assembly (120 Mil Output)



TP153251 Electrical Motor Control Assembly